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Status of Atlantic Salmon (Salmo salar L.) Stocks of the Newfoundland Region, 1987

by

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Abstract

Commercial catches (preliminary figures) of small and large salmon in both insular Newfoundland and Labrador in 1987 showed an overall increase over 1986. Catches of small salmon increased over historic levels. Catches of large salmon were comparable to historic levels. The overall increase in commercial catches of small and large salmon in insular Newfoundland was attributed mainly to SFA 3. Most other SFAs experienced decreases, particularly along the south coast (SFAs 9, 10, and 11). As a result of the worst drought conditions in 40 years, most scheduled rivers in insular Newfoundland were closed for most of the angling season in 1987. Consequently, recreational catches of grilse were about half of that recorded for 1986 and historically. Labrador was unaffected by drought conditions; catches of grilse and large salmon in 1987 increased over 1986 and historic levels overall. There was an apparent overall increase in abundance of small and large salmon in Labrador in 1987 compared to 1986. With the exception of SFA 3, the reverse appears to have been true for insular Newfoundland. Predictions regarding catches of small and large salmon for Labrador and for small salmon for insular Newfoundland in 1988 are provided.

Résumé

En 1987, les prises commerciales (données préliminaires) de saumons de petite et de grande taille dans l'île de Terre-Neuve et au Labrador ont augmenté dans l'ensemble par rapport à celles de 1986. Les prises de saumon de petite taille ont augmenté par rapport aux niveaux des années passées. Les prises de saumon de grande taille étaient comparables aux niveaux de prises antérieurs. L'augmentation globale des prises commerciales de saumons de petite et de grande taille dans l'île de Terre-Neuve a été attribuée surtout à la zone de pêche 3. Presque toutes les autres zones de pêche ont enregistré des diminutions, notamment le long de la côte sud (zones 9, 10 et 11). Par suite des pires conditions de sécheresse enregistrées en 40 ans, la plupart des rivières de l'île de Terre-Neuve inscrites à l'Annexe ont été fermées à la pêche pendant presque toute la saison de pêche à la ligne en 1987. Les prises sportives de castillons correspondaient donc à environ la moitié de celles enregistrées en 1986 et dans les années antérieures. Le Labrador n'a pas été touché par la sécheresse; les prises de castillons et de saumons de grande taille en 1987 ont augmenté dans l'ensemble par rapport aux niveaux de 1986 et aux niveaux antérieurs. En 1987, on a relevé une augmentation globale apparente de l'abondance des saumons de petite et de grande taille au Labrador par rapport à 1986. A l'exception de la zone de pêche 3, l'inverse semble avoir été vrai pour l'île de Terre-Neuve. Les prévisions pour 1988 des prises de saumon de petite et de grande taille pour le Labrador et de saumons de petite taille pour l'île de Terre-Neuve sont incluses.

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Introduction

This paper presents the status of Atlantic salmon stocks of the Newfoundland Region (Fig. 1) in 1987. Catch and effort statistics for the commercial and recreational fisheries and fishway counts (insular Newfoundland) are examined in relation to historical data and the 1987 Management Plan.

Under the 1984 Management Plan, the start of the Newfoundland and Labrador commercial fishery was delayed until June 5 (compared to May 18 for 1981-83 and May 15 prior to 1981). A voluntary license buy-back program involving both full-time and part-time fishermen went into effect for all Salmon Fishing Areas. These restrictions were implemented as a means of reducing the interception of mainland-origin salmon as well as salmon destined to return to rivers on the southwest coast of Newfoundland. An estimated 25% of the total catch (by weight) of Atlantic salmon taken in the Newfoundland and Labrador commercial fishery (1969-75) was of mainland origin (Pippy 1982). In 1985, the June 5 starting date remained in effect and there was a mandatory buy-back of part-time licenses. In 1986, there was a further reduction in the commercial fishing season. The opening date remained June 5; however, the closure date was October 15 as opposed to December 31 for years previous to 1986. As in 1984 and 1985, it was illegal in 1986 to retain salmon caught as by-catch. A mandatory tagging program was introduced for the first time in the commercial fishery in all areas of Newfoundland and Labrador in 1986. Regulations pertaining to the commercial fishery in 1987 were the same as for 1986. Licensed effort for the Newfoundland Region for the period from 1983 (prior to the restrictions outlined above) to 1987 is shown in Table 1.

With respect to the recreational fishery, in 1984 a hook-and-release policy pertaining to large salmon was adopted for insular Newfoundland; large salmon that were caught and released were considered part of the bag limit. Regulations governing grilse remained unchanged. Labrador was exempt from the hook-and-release regulation. In 1985, the hook-and-release regulation was extended to include grilse. Released fish were not considered part of the bag limit. Once the daily bag limit (two fish) was retained (grilse in insular Newfoundland; grilse and/or large salmon in Labrador), angling ceased for the day. In 1986, a limit of four was placed on the number of fish an angler could hook and release per day. Angling ceased for the day when one or the other daily bag limits (two fish retained or four fish hooked and released) was attained. A season bag limit of 15 fish was also imposed. Recreational fishery regulations in 1987 were the same as for 1986.

As a result of the worst drought conditions experienced in some 40 years, most scheduled rivers in insular Newfoundland were closed for the greater part of the angling season in 1987. Opening and closure dates for the rivers affected are shown in Table 2.

Methods

The 1987 catch and effort data were added to that previously presented by Moores et al. (1978), Moores and Tucker (1979, 1980), Ash and Tucker (1984), Moores and Ash (1984), Ash and O'Connell (1986), and Ash and O'Connell

(unpublished) for the recreational fishery and to that found in May and Lear (1971), Waldron (1974), Reddin and Waldron (1976), Moores and Dawe (1980), Reddin and Day (1980), Reddin and Short (1981), Short and Reddin (1981a, 1981b), Ash (1984), Moores et al. (1984), Ash and O'Connell (1986), and Ash and O'Connell (unpublished) for the commercial fishery. Effort in the commercial fishery was presented as the number of gear units (50 fathoms of gill net or salmon trap) licensed to prosecute the fishery. Recreational fishing effort was presented as rod days (defined as any day or part thereof on which an angler fishes).

The calculation of mean weights of small and large salmon in the commercial fishery as well as estimated numbers of fish in each category followed procedures outlined in Ash and O'Connell (1986).

Means and 95% confidence intervals for ratio variables were calculated according to Cochran (1977).

Results

Newfoundland Region

Commercial fishery: The commercial catch of small salmon for the entire Newfoundland Region in 1987 (Table 3) increased marginally over 1986 (10.0%), but substantially over the 1977-86 (26.1%) and 1982-86 (36.0%) means. The catch of large salmon in 1987 increased over 1986 (19.7%), was slightly below the 1977-86 mean (5.3%), but improved markedly over the 1982-86 mean (32.9%). The total catch of Atlantic salmon in 1987 increased over 1986 (15.0%), the 1977-86 mean (7.0%), and the 1982-86 mean (34.5%). Additional information, namely catch in terms of number, and percent small (by weight and by number), is presented in Appendix 1a.

Recreational fishery: The catch of grilse for the whole Newfoundland Region in 1987 (Table 3 and Appendix 2a) was down dramatically from 1986 (38.0%), and the 1977-86 (37.0%), and 1982-86 (38.7%) means. This was due to the large number of river closures in insular Newfoundland as a result of drought conditions. In light of regulations governing the retention of large salmon, comparisons for this component in terms of the entire Newfoundland Region are of no pertinent value. The same applies to total recreational catch.

Effort likewise declined substantially from 1986 (37.2%) and the 1977-86 (32.6%) and 1982-86 (39.2%) means. Catch per unit of effort (CPUE) on the other hand remained relatively unchanged from 1986 and the two means.

Insular Newfoundland

Commercial fishery: The commercial catch of small salmon for the insular Newfoundland portion of the Newfoundland Region in 1987 (Table 3 and Appendix 1b) increased slightly over 1986 (9.4%) but substantially over the 1977-86 (28.4%) and 1982-86 (33.2%) means. The catch of large salmon in 1987

showed a substantial increase over 1986 (26.2%), was similar to the 1977-86 mean (-1.7%), and improved markedly over the 1982-86 mean (36.9%). Total catch in 1987 increased over 1986 (16.3%), the 1977-86 mean (12.6%), and the 1982-86 mean (34.7%).

Recreational fishery: As mentioned above, the catch of grilse in insular Newfoundland in 1987 decreased dramatically as a result of river closures (Table 3 and Appendix 2b). Catch decreased by 46.3% from 1986, by 44.9% from the 1977-86 mean, and by 47.2% from the 1982-86 mean.

Effort also decreased from 1986 (39.5%) and the 1977-86 (35.1%) and 1982-86 (41.6%) means. CPUE decreased by 12.9% from 1986, by 18.2% from the 1977-86 mean, and by 10.0% from the 1982-86 mean.

Labrador

Commercial fishery: The catch of small salmon in the Labrador portion of the Newfoundland Region in 1987 (Table 3 and Appendix 1c) showed a small increase over 1986 (11.9%), but improved substantially over the 1977-86 (20.5%) and 1982-86 (45.4%) means. The catch of large salmon in 1987 increased over 1986 (12.9%), decreased from the 1977-86 mean (9.2%), but increased by 29.1% over the 1982-86 mean. Total catch which increased by 12.9% over 1986, was similar to the 1977-86 mean (-1.5%), and increased by 33.7% over the 1982-86 mean.

Recreational fishery: In contrast to the situation for insular Newfoundland, Labrador was unaffected by drought conditions. The catch of grilse in 1987 increased substantially over 1986 (45.8%) and the 1977-86 (34.6%) and 1982-86 (52.2%) means (Table 3 and Appendix 2c). The catch of large salmon also increased substantially over 1986 (47.7%), was slightly below the 1977-86 mean (1.9%), and increased by 27.4% over the 1982-86 mean.

Effort increased over 1986 (22.6%) and both means (26.7%). CPUE improved over 1986 (18.2%), the 1977-86 mean (2.0%), and the 1982-86 mean (19.5%).

Status by Salmon Fishing Area

Commercial catch data for each Salmon Fishing Area (SFA) of the Newfoundland Region are presented in Table 4 and Appendix 1d-n. Recreational catch and effort data are shown in Table 4 and Appendix 2d-n. Table 5 shows commercial and recreational catches in 1987 for each SFA expressed as percentages in relation to 1986, the 1977-86 mean, and the 1982-86 mean.

Labrador

SFA 1: The commercial catch of small salmon in 1987 was substantially below 1986 and the two means. The catch of large salmon was slightly below 1986, remained well below the 1977-86 mean, but increased over the 1982-86 mean.

The catch of grilse in the recreational fishery in 1987 showed a dramatic increase over 1986 and both means. The catch of large salmon increased slightly over 1986 but was well below the means. Effort increased over 1986 and both means. CPUE increased over 1986, was below the 1977-86 mean, but similar to the 1982-86 mean.

SFA 2: The commercial catch of small salmon in 1987 increased substantially over 1986 and both means. The catch of large salmon improved somewhat over 1986, was slightly below the 1977-86 mean, but substantially higher than the 1982-86 mean.

Recreational catches of both grilse and large salmon in 1987 increased substantially over 1986, being most pronounced for the large salmon component. Effort and CPUE increased over 1986 and both means.

Insular Newfoundland

SFA 3: Commercial catches of both small and large salmon in 1987 increased dramatically over 1986 and both means.

In 1986, because of river closures, the catch of grilse in the recreational fishery was down considerably compared to previous years. In 1987, river closures (Table 2) resulted in a catch that was less than for 1986 and substantially below the two means. Effort followed the same trend. CPUE in 1987 was down slightly from 1986 and the 1982-86 mean; the difference between 1987 and the 1977-86 mean was more pronounced.

SFA 4: The commercial catch of small salmon was slightly below 1986 but substantially higher than both means. The catch of large salmon was down slightly from 1986 and the 1977-86 mean; the decrease from the 1982-86 mean, however, was more pronounced.

The number of rivers closed and the periods of closure in SFA 4 in 1987 are shown in Table 2. The catch of grilse in the recreational fishery was well below 1986 and both means. The same applies to effort expenditure. CPUE was the same as in 1986 but below both means.

Sections of the Exploits River (Main Stem and Mid Brook) and the Gander River (Lower and Upper) remained open for the entire angling season (Table 2). Catch and effort data for these sections as well as the totals for each river for the period 1982-87 are shown in Table 6. The catch of grilse and effort for the combined Main Stem and Mid Brook sections of the Exploits River in 1987 declined from 1986 and the 1982-86 mean; CPUE increased over 1986 and the 1982-86 mean. Angling catch for the entire Exploits River was comparable to 1986 and the 1982-86 mean; effort was below 1986 and the 1982-86 mean while the reverse was true for CPUE. Angling catch and effort for the combined lower and upper sections of Gander River decreased from 1986 and the 1982-86 mean; CPUE was the same as for 1986 but below the mean. The same pattern pertained to the entire river.

Counts of grilse and large salmon at fishways in SFA 4 are provided in Tables 7 and 8 respectively. The fishways concerned are located on Indian Brook, Exploits River (Bishop's Falls and Great Rattling Brook tributary) and Gander River (Salmon Brook tributary). Counts of grilse at all of these fishways in 1987 declined from 1986 and the means, with the declines being most pronounced for Indian Brook and Salmon Brook. Counts of large salmon were also below 1986 and both means for all fishways in SFA 4. It should be cautioned that the means for Indian Brook and Exploits River should be higher because of the inclusion of partial counts.

SFA 5: The commercial catch of small salmon in 1987 increased over 1986 and both means while the reverse was true for large salmon.

River closure information is presented in Table 2. The catch of grilse and effort in the recreational fishery were down considerably from 1986 and both means. CPUE decreased only slightly from 1986 and was comparable to both means.

The lower Terra Nova River and the section of the river between the upper and lower fishways remained open for the entire angling season (Table 2). Catch and effort data for these sections as well as the entire river for the period 1983-87 are shown in Table 6. The catch of grilse for the lower section and the section between the fishways combined was slightly below 1986 and similar to the 1983-86 mean. Effort increased over 1986 and the mean while the reverse was true for CPUE. For the entire river, catch was below 1986 and the 1983-86 mean. Effort increased over 1986 but was below the mean; CPUE was below 1986 and the mean to a lesser extent.

Fishways in SFA 5 are located on Middle Brook and Terra Nova River (upper and lower). The count of grilse for Middle Brook in 1987 (Table 7) declined somewhat from 1986 and was below both means; the count of large salmon (Table 8) increased over 1986 but remained well below both means. A partial count was included in the 1977-86 mean for Middle Brook. The count of grilse for the Terra Nova River fishway declined slightly from 1986 and the 1977-86 mean while the difference from the 1982-86 mean was somewhat greater. The decline in grilse count from 1986 and both means was more pronounced for the upper Terra Nova River fishway. Counts of large salmon at both fishways in 1987 were well below 1986 and both means.

SFA 6: The commercial catch of small salmon in 1987 decreased slightly from 1986 but was marginally above the two means. The catch of large salmon declined from 1986 and the 1977-86 mean and increased slightly over the 1982-86 mean.

River closures in SFA 6 are shown in Table 2. The catch of grilse and effort in the recreational fishery declined substantially from 1986 and the two means; CPUE was lower as well.

SFA 7: The catch of small salmon in the commercial fishery in 1987 showed a marked improvement over 1986 and the 1982-86 mean but fell short of the 1977-86 mean. The same applied to large salmon.

River closures are presented in Table 2. The catch of grilse in the recreational fishery was considerably below 1986 and both means. Effort was slightly below 1986 but remained well below the two means. CPUE was lower than for 1986 and the two means.

SFA 8: The commercial catch of grilse in 1987 decreased substantially from 1986 and the two means. The catch of large salmon improved markedly over 1986 but remained below the two means, the decline being most pronounced for the 1977-86 mean.

Only Renews River was closed in SFA 8 (Table 2). Angling catch was considerably below 1986 and the two means for this area.

SFA 9: The commercial catch of both small and large salmon in 1987 decreased substantially from 1986 and the two means. River closure information for SFA 9 is shown in Table 2. In the recreational fishery, the catch of grilse, effort, and CPUE showed marked decreases from 1986 and the two means.

A number of counting fences have been operated on rivers in SFA 9 for the past several years. The rivers involved are Biscay Bay River, Northeast Brook (Trepassey), Colinet River, and Little Salmonier River. Counts of grilse (Table 7) decreased from 1986 for all rivers except Colinet River. The increase for this river would have been due in part to stock restoration efforts. The greatest decline occurred in Biscay Bay River. Counts of large salmon (Table 8) in 1987 equalled or surpassed 1986 for all rivers except Little Salmonier where the reverse occurred. The greatest increase occurred in Colinet River. Partial counts were included in the Little Salmonier River means.

SFA 10: Commercial catches of both small and large salmon in 1987 were well below 1986 and the two means.

River closures in SFA 10 are shown in Table 2. Recreational catch and effort in 1987 were considerably less than for 1986 and the two means. CPUE showed a marked decline from 1986; however the difference from the two means was not as pronounced.

The count of grilse at the Northeast River (Placentia) fishway (Table 7) was down substantially from 1986. It should be pointed out, however, that the 1986 count was by far the highest recorded for that river. The count was slightly below the means. The count of large salmon (Table 8) was substantially lower than 1986 and the means. Partial counts were included in both means.

SFA 11: The commercial catch of small salmon in 1987 was well below 1986 and the 1982-86 mean but similar to the 1977-86 mean. The catch of large salmon was similar to 1986 but remained below the means.

River closures are shown in Table 2. Recreational catch and effort for the entire SFA declined from 1986 and the means; CPUE was similar to 1986 but well below the means.

Bay du Nord River, Southeast Brook, and Dolland Brook remained open for the entire angling season. Catch and effort data for these rivers are shown in Appendices 3-5 respectively. Catches in 1987 increased over 1986 for Bay du Nord River and Southeast Brook but remained below the means. CPUE increased over 1986 and the two means for Southeast Brook; for Bay du Nord River CPUE increased over 1986 but was below the means. The catch in Dolland Brook was below 1986 but higher than the means; CPUE was similar to 1986 but below the means.

The count of grilse at the Grand Bank Brook fishway in 1987 declined substantially from 1986 (Table 7); a decline was also noted for large salmon (Table 8).

Predictions for 1988

Based on the recreational catch in 1983, fishway counts, and a modal smolt age of 3+ years, it is expected that the catch of small salmon in insular Newfoundland in 1988 will be comparable to 1987. Given the level of catch of small salmon in the commercial fishery in Labrador in 1982 and a modal smolt age of 4+ years, the 1988 catch will probably be lower than in 1987. This prediction assumes some sort of stock and recruitment relationship with recreational and commercial catches reflective of parental stock levels in respective years.

A regression of commercial catch of large salmon (year i+1) on small salmon (year i) for Labrador (O'Connell et al. 1987) gave a predicted catch of 342 t in 1987; the actual catch was 306 t. The following relationship is used to predict the catch of large salmon in 1988 for Labrador: $\log_e Y = 3.0259 + 0.5873 \log_e X$; $r^2 = 0.3669$; $P < 0.05$. The predicted catch (and 95% confidence interval) is 377 (289-491) t. For reasons outlined by O'Connell et al. (1987), this technique is inappropriate for predictive purposes for insular Newfoundland.

Discussion

Commercial catches of small and large salmon in both insular Newfoundland and Labrador in 1987 improved over 1986. Catches of small salmon increased over historic levels. In contrast to the situation for the past few years, catches of large salmon in 1987 were comparable to historic levels.

It is evident from Table 5 that the overall increase in commercial landings of both small and large salmon in insular Newfoundland can be attributed mainly to SFA 3. Most other SFAs experienced decreases, particularly along the south coast (SFAs 9, 10, and 11). Table 9 shows commercial catches in SFA 3 broken out in terms of Statistical Sections (Fig. 2). The greatest increases in catch in 1987 over 1986 occurred in Section 2 (171% for small, 182% for large) and Section 3 (129% for small, 179% for large). In Labrador, only SFA 2 showed an increase over 1986. Table 10 shows commercial catches in SFA 2 broken out in terms of Statistical Sections (Fig. 3). The greatest increases in catch occurred in Section 51 (32%

for small, 41% for large). Geographically speaking, the increases occurred for the most part in an area encompassing southern Labrador and the northernmost portion of the Great Northern Peninsula.

O'Connell et al. (1985) found a significant negative relationship between the extent of Arctic ice coverage and salmon catches in Section 53 of Labrador. It is hypothesized that extensive ice coverage in Section 53 in 1987, through its effect on sea-surface temperature, possibly displaced salmon farther south thereby contributing to the increased catches in southern Labrador and the northern portion of the Great Northern Peninsula. An analysis of information obtained from tagging studies conducted at Goose Cove (Section 2) in 1979 and 1980, as well as freshwater ages (determined from the tagging studies and several other commercial sampling studies in Section 2), suggest that a large proportion of small and large salmon caught in SFA 3 originates in Labrador (D. G. Reddin, unpublished data). In view of the regulatory changes affecting the commercial fishery over the past several years, additional smolt tagging operations should now be carried out. This would provide current information on migration patterns and areas of commercial utilization of selected stocks, and provide valuable information on the influence of marine environmental conditions on distribution and catchability of these populations.

As can be seen in Table 2, most river closures in insular Newfoundland were in effect from mid-July until the end of the angling season. The number of rivers closed constituted a substantial proportion of the major rivers in insular Newfoundland. Figure 4a-e shows average weekly maximum temperature (°C) recorded at fishways in insular Newfoundland for the years 1984-87 (only 1986-87 are available for Grand Bank Brook). Similarly, average weekly water levels (cm) are presented in Figures 5a-e. The weeks shown in these figures are standardized weeks (Ash and O'Connell 1986) - weeks 23-26 = June; 27-30 = July; 31-35 = August; 36-39 = September; 40-43 = October. Maximum temperatures recorded for July in 1987 were higher than those recorded for the same month for years prior to 1987. From late June-early July on, water levels in all rivers were the lowest on record; in fact, negative values were recorded at Salmon Brook and Middle Brook fishways for the first time. Such environmental conditions could have resulted in lower catchability.

At fishways and counting fence installations, counts of grilse, and in most cases counts of large salmon, showed an overall decline in 1987. Because of the possibility that drought conditions had delayed the upstream migration of salmon, fishway and counting fence operations were extended beyond the closure period of previous years (end of August-1st week of September). Closure dates are presented in Table 11. A substantial proportion of the total count at Great Rattling Brook fishway (57%), Grand Bank Brook fishway (56%), and Salmon Brook fishway (35%) was recorded during the period of extended operations; however, very few salmon were encountered at the remaining facilities. It is evident from Figures 5a-e that with the exception of Northeast River, Placentia, lower than normal water levels also prevailed throughout much of the extended operation period. An examination of monthly Meteorological Summaries (Atmospheric and Environmental Service, Environment Canada) for Gander and St. John's for October and November indicates that precipitation levels in late October and November approached normal levels. This most likely resulted in an increase in water level in rivers affected by

the drought. It is possible that salmon entered fishway and counting fence rivers and rivers in general during this period. Spawning for most insular Newfoundland salmon populations occurs in late October and November. The distribution of both late- and early-arriving salmon to spawning areas was probably not adversely affected.

It is possible that drought conditions causing delayed entry into rivers might have resulted in a longer than usual period of susceptibility of salmon to the commercial fishery.

While it appears that total river escapements were down in general in 1987, reduced angler exploitation most likely offset some of the impact on spawning escapements. On the other hand, natural mortality of adult salmon resulting from adverse environmental conditions (R. J. Gibson, unpublished data) most likely served to reduce spawning escapements.

Simultaneous increases in commercial and recreational catches suggest that there was an overall increase in the abundance of both small and large salmon in Labrador in 1987 over 1986. With the exception of SFA 3, commercial catches and fishway counts suggest an overall decline in the abundance of both small and large salmon in 1987 compared to 1986 for insular Newfoundland.

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Table 1. Number of licensed Atlantic salmon fishermen and amount of gear for 1983-87 by Salmon Fishing Area for the Newfoundland Region.

Salmon Fishing Area	1983		1984		1985		1986		1987	
	Fishermen	Gear units	Fishermen	Gear units	Fishermen	Gear units	Fishermen	Gear units	Fisherman	Gear units
Nfld. Region (Labrador)										
1	273	1,080	248	992	234	936	212	848	213	852
2	417	1,879	378	1,471	351	1,402	356	1,424	362	1,475
Nfld. Region (Insular)										
3	578	2,315	512	1,892	439	1,750	438	1,752	435	1,738
4	1,033	3,729	892	3,124	695	2,768	696	2,782	691	2,756
5	479	1,661	395	1,341	283	1,122	281	1,124	275	1,100
6	383	1,499	317	1,160	259	1,036	257	1,028	254	1,014
7	356	1,402	277	1,012	229	914	231	922	230	916
8	239	1,089	200	774	186	744	183	732	176	704
9	68	235	58	201	45	178	45	180	43	172
10	250	934	201	718	162	644	164	656	164	656
11	263	1,069	213	786	182	722	185	740	182	728
Total Nfld. Region	4,339	16,892	3,691	13,471	3,065	12,216	3,048	12,188	3,025	12,111

Table 2. Periods of closure due to drought conditions for scheduled rivers in Newfoundland Region (Insular), 1987.

River name	River number	Period closed
SFA 3		
Western Brook, Hare Bay	0300800	Jul 17 - end of season
Easter Brook, Canada Bay	0401640	Jul 14 - end of season
Northeast Brook, Chimney Bay	0401670	Jul 17 - end of season
Beaver Brook, Western Bay	0401690	Jul 14 - end of season
Northwest Brook, Canada Bay	0401790	Jul 17 - end of season
Little Harbour Deep River	0402500	Jul 17 - end of season
Coney Arm River	0402880	Jul 17 - August 6
Main River, Sops Arm	0403110	Jul 17 - August 6
Wild Cove Brook, White Bay	0403580	Jul 14 - end of season
Western Arm Brook	0403620	Jul 14 - end of season
Middle Arm Brook	0403670	Jul 14 - end of season
Southern Arm Brook	0403700	Jul 14 - end of season
Southwest Brook, Baie Verte	0504040	Jul 14 - end of season
Pacquet Bay, Woodstock Brook	0504280	Jul 14 - end of season
SFA 4		
East Brook, Burlington River	0604820	Jul 14 - end of season
Indian River	0605570	Jul 14 - end of season
Riverhead Brook, West Brook	0605640	Jul 14 - end of season
South Brook, Halls Bay	0605680	Jul 14 - end of season
Tommy's Arm River	0605940	Jul 14 - end of season
Northwest Arm Brook	0606570	Jul 17 - end of season
West Arm Brook, Western Arm	0606720	Jul 17 - end of season
New Bay River, Point Leamington	0606820	Jul 17 - end of season
Charles Brook	0707660	Jul 17 - end of season
Northern Arm Brook	0707760	Jul 17 - end of season
Peters River	0707780	Jul 17 - end of season
Exploits River (Main Stem)	0707791	Did not close during season
Great Rattling Brook	0707792	Jul 17 - end of season
Stoney Brook	0707793	Jul 17 - end of season
Mid Brook	0707794	Did not close during season
Indian Arm Brook	0708210	Jul 14 - end of season
Dog Bay River, Horwood River	0708480	Jul 17 - end of season
Gander River, Lower	0908611	Did not close during season
Upper	0908612	Did not close during season
Salmon Brook	0908613	Jul 14 - end of season
Northwest Brook	0908614	Jul 14 - end of season
Southwest Brook	0908615	Jul 14 - end of season
Soulis Brook	0908616	Jul 14 - end of season
Ragged Harbour River	0908820	Jul 25 - end of season
Anchor Brook	0908940	Jul 25 - end of season
Deadmans Brook	0908950	Jul 25 - end of season
Windmill Brook	0909030	Jul 25 - end of season

Table 2 (cont'd)

River name	River number	Period closed
SFA 5		
Northwest Brook (Indian Brook)	1109480	Jul 17 - end of season
Indian Bay Brook	1109490	Jul 16 - end of season
Northwest River (Trinity)	1109560	Jul 17 - end of season
Traverse Brook	1109750	Jul 17 - end of season
Middle Brook	1109760	Jul 16 - end of season
Gambo Brook	1109780	Jul 17 - end of season
Northwest Brook (Alexander Bay)	1110130	Jul 17 - end of season
Terra Nova River (Lower)	1110221	Did not close during season
Maccles Brook	1110222	Jul 17 - end of season
Between fishways	1110223	Did not close during season
Above upper fishway	1110224	Closed for season
Northwest River (Port Blandford)	1210880	Jul 17 - end of season
Salmon Brook (Port Blandford)	1210890	Jul 17 - end of season
Southwest Brook (Port Blandford)	1210930	Jul 17 - end of season
SFA 6		
Salmon Cove River (Trinity Bay)	1512520	Jul 17 - end of season
Trouty River	1512620	Jul 17 - end of season
Popes Harbour River	1612750	Jul 17 - end of season
Shoal Harbour River	1613060	Jul 17 - end of season
Deer Harbour River	1713950	Jul 17 - end of season
Bellevue Brook, Trout Brook	1714680	Jul 17 - end of season
SFA 7		
Salmon Cove River	2115720	Jul 17 - end of season
North River (Conception Bay)	2215970	Jul 17 - end of season
South River (Conception Bay)	2215990	Jul 17 - end of season
North Arm River (Holyrood)	2216220	Jul 17 - end of season
SFA 8		
Renews River	2617640	Jul 17 - end of season
SFA 9		
Biscay Bay River	2700230	Jul 17 - end of season
Northwest River (Trepassey)	2700380	Jul 16 - end of season
Peters River (SMB)	2800860	Jul 17 - end of season
Salmonier River	2801690	Jul 16 - end of season
Colinet River	2801920	Jul 17 - end of season
North Harbour River (SMB)	2802060	Jul 17 - end of season
Little Salmonier River (SMB)	2802170	Jul 16 - end of season
Big Barachois River	2802210	Jul 17 - end of season
Branch River	2802380	Jul 24 - Aug 27

Table 2 (cont'd)

River name	River number	Period closed
SFA 10		
Great Barasway Brook (Placentia)	2902820	Jul 24 - end of season
Southeast River (Placentia)	2902980	Jul 17 - Aug 27
Northeast River (Placentia)	2903070	Jul 17 - Aug 27
Come By Chance River	3003740	Jul 17 - end of season
North Harbour River	3003880	Jul 17 - end of season
Black River	3004090	Jul 17 - end of season
Pipers Hole River	3004160	Jul 17 - end of season
Bay de Leau River	3105760	Jul 17 - end of season
SFA 11		
Grand Bank Brook	3308040	Jul 17 - end of season
Garnish River	3308440	Jul 17 - end of season
Long Harbour River	3409780	Jul 17 - end of season
Simmons Brook	3410940	Jul 17 - end of season
Southwest Brook	3411000	Jul 17 - end of season
Old Bay Brook	3511530	Jul 17 - end of season
Taylors Bay Brook	3511560	Jul 17 - end of season
Conne River	3613350	Jul 14 - end of season
Grey River	3716620	Jul 17-Aug 6, Aug 22-Aug 27
White Bear River	3717440	Jul 17-Aug 6, Aug 22-Aug 27
Grandy's River	3817890	Jul 17-Aug 6, Aug 22-Aug 27
Cinq Cerf Brook	3818490	Jul 17-Aug 6, Aug 22-Aug 27

Table 3. Atlantic salmon commercial catch data and recreational catch and effort data for the whole Newfoundland Region and for the Insular Newfoundland and Labrador portions of the Region, 1974-87. The 1977-86 and 1982-86 means and 95% confidence limits are included.

	Commercial catch (tonnes)[1]									Recreational catch (no.) and effort (rod days)													
	Small			Large			Total			Grilse ($x10^2$)			Large salmon			Total ($x10^2$)			Effort ($x10^2$)			CPUE		
Year	Ins NF	Lab	NF Reg	Ins NF	Lab	NF Reg	Ins NF	Lab	NF Reg	Ins NF	Lab	NF Reg	Ins NF	Lab	NF Reg	Ins NF	Lab	NF Reg	Ins NF	Lab	NF Reg	Ins NF	Lab	NF Reg
1974	432	94	526	586	524	1110	1017	617	1634	155	18	173		512			23		679	28	707	0.23	0.82	0.25
1975	466	176	642	641	429	1070	1106	605	1711	161	29	190		173			31		602	20	622	0.27	1.52	0.31
1976	372	137	509	548	523	1071	922	661	1583	164	32	196		520			38		649	33	681	0.26	1.15	0.30
1977	352	117	469	651	481	1132	1004	599	1603	214	29	243		693			36		691	33	724	0.33	1.09	0.36
1978	171	56	227	380	375	755	550	430	980	197	21	218		584			27		636	38	674	0.32	0.70	0.34
1979	334	81	415	195	213	408	526	294	820	179	32	211		490			37		502	32	534	0.36	1.16	0.41
1980	498	209	707	538	579	1117	1034	788	1822	234	29	262		552			34		666	25	691	0.36	1.38	0.40
1981	379	224	603	556	538	1094	936	763	1699	304	35	339		300			38		779	19	797	0.40	2.06	0.44
1982	362	144	506	270	362	632	629	506	1135	260	28	288		541			34		852	31	883	0.31	1.08	0.34
1983	263	91	354	269	239	508	534	330	864	216	24	240		298			27		822	31	853	0.27	0.85	0.29
1984	244	50	294	239	179	418	482	229	711	248	20	268		325			23		797	31	829	0.31	0.73	0.33
1985	348	75	423	242	136	378	590	211	801	265	20	285		194			22		828	27	855	0.32	0.82	0.34
1986	392	126	518	282	271	553	674	397	1071	242	24	266		283			27		790	31	821	0.31	0.88	0.33
1987	429	141	570	356	306	662	784	448	1232	130	35	165		418			39		478	38	516	0.27	1.04	0.33
$\bar{x} \pm$ 95% C.L.																								
1977-86																								
	334	117	452	362	337	699	696	455	1151	236	26	262		426			30		736	30	766	0.33	1.02	0.35
	±65	±43	±102	±115	±111	±220	±152	±148	±292	±26	±4	±27		±118			±4		±79	±4	±78	±0.03	±0.22	±0.03
1982-86																								
	322	97	419	260	237	498	582	335	916	246	23	269		328			26		818	30	848	0.30	0.87	0.32
	±80	±47	±120	±24	±108	±127	±94	±152	±224	±24	±4	±24		±160			±6		±31	±2	±31	±0.02	±0.17	±0.02

[1] Figures for 1987 are preliminary.

Table 4. Atlantic salmon commercial catch data and recreational catch and effort data for 1987 by Salmon Fishing Area (SFA) for the Newfoundland Region. Catches in 1986, the 1977-86 mean and the 1982-86 mean (in parentheses) are included.

Salmon Fishing Area	Commercial catch (tonnes)									Recreational catch (no.) and effort (rod days)														
	1987[1]			1986			$\bar{x}$ 1977-86 (1982-86)			1987					1986					$\bar{x}$ 1977-86 (1982-86)				
	Sm	Lg	Tot	Sm	Lg	Tot	Sm	Lg	Tot	Gr	Lg	Tot	Effort	CPUE	Gr	Lg	Tot	Effort	CPUE	Gr	Lg	Tot	Effort	CPUE
NF Reg. (Labrador)																								
1	13	62	75	24	65	89	23 (20)	81 (55)	104 (75)	817	135	952	955	1.00	369	125	494	568	0.87	644 (589)	268 (194)	912 (783)	751 (756)	1.21 (1.04)
2	128	244	373	102	206	308	94 (77)	257 (182)	351 (259)	2662	283	2945	2806	1.05	2024	158	2182	2483	0.88	1974 (1722)	157 (134)	2131 (1856)	2227 (2270)	0.96 (0.82)
NF Reg. (Insular)																								
3	188	179	367	102	90	192	116 (88)	112 (79)	228 (166)	563			1121	0.50	772			1430	0.54	1576 (1467)			2651 (2803)	0.60 (0.53)
4	111	73	184	119	81	200	82 (87)	74 (60)	156 (147)	5453			18564	0.29	9293			31650	0.29	9846 (10062)			28639 (31038)	0.36 (0.33)
5	39	21	60	36	25	61	31 (33)	42 (29)	73 (62)	1664			5267	0.32	4053			11510	0.35	3002 (3006)			9628 (11131)	0.32 (0.27)
6	27	20	47	31	23	54	26 (26)	30 (19)	56 (45)	137			1306	0.10	445			2596	0.17	364 (354)			2687 (2957)	0.14 (0.12)
7	9	15	24	7	12	19	11 (7)	28 (14)	39 (21)	28			632	0.04	102			700	0.15	113 (121)			1493 (1428)	0.08 (0.09)
8	8	12	20	16	8	24	12 (13)	26 (13)	38 (26)	43			268	0.16	138			696	0.20	87 (89)			445 (523)	0.20 (0.18)
9	4	1	5	6	2	8	10 (9)	3 (2)	13 (11)	867			5994	0.14	2298			8807	0.26	1877 (2088)			8091 (9255)	0.24 (0.23)
10	18	9	27	34	15	49	21 (27)	15 (12)	37 (39)	429			3348	0.13	1535			6387	0.24	1310 (1343)			7942 (7628)	0.17 (0.18)
11	25	26	50	41	26	67	25 (32)	32 (33)	57 (64)	3829			11309	0.34	5546			15233	0.36	5415 (6099)			12051 (15017)	0.45 (0.41)

[1] Preliminary figures.

Table 5. Commercial and recreational catches in 1987 for each SFA expressed as percentages in relation to 1986, the 1977-86 mean, and the 1982-86 mean.

Salmon Fishing Area	Commercial catch (tonnes)						Recreational catch (no.)					
	Small			Large			Grilse			Large salmon		
	1986	$\bar{x}$ 1977-86	$\bar{x}$ 1982-86	1986	$\bar{x}$ 1977-86	$\bar{x}$ 1982-86	1986	$\bar{x}$ 1977-86	$\bar{x}$ 1982-86	1986	$\bar{x}$ 1977-86	$\bar{x}$ 1982-86
1	-46	-43	-35	-5	-23	+13	+121	+27	+39	+8	-50	-30
2	+25	+36	+66	+18	-5	+34	+32	+35	+55	+79	+80	+111
3	+84	+62	+114	+99	+60	+127	-27	-64	-62			
4	-7	+35	+28	-10	-1	-22	-41	-45	-46			
5	+8	+26	+18	-16	-50	-28	-59	-45	-45			
6	-13	+4	+4	-13	-33	+5	-69	-62	-61			
7	+29	-18	+29	+25	-46	+7	-73	-75	-77			
8	-50	-33	-38	+50	-54	-8	-69	-51	-52			
9	-33	-60	-56	-50	-67	-50	-62	-54	-58			
10	-47	-14	-33	-40	-40	-25	-72	-67	-68			
11	-39	0	-22	0	-19	-21	-31	-29	-37			

Table 6. Angling data for sections of the Gander, Exploits, and Terra Nova rivers that were open for the entire angling season in 1987, and the total catch for each river.

River name	1982	1983	1984	1985	1986	1987	1982-86 $\bar{x} \pm$ 95% CL
Gander River (lower + upper)							
Catch	2013	2110	1581	2239	1789	1437	1946.4 ± 325.6
Effort	7057	5937	6260	7385	7733	6254	6874.4 ± 938.8
CPUE	0.29	0.36	0.25	0.30	0.23	0.23	0.28 ± 0.06
Total river:							
Catch	2381	2272	2041	3358	2361	1444	2482.6 ± 630.3
Effort	8026	6934	7590	10207	9740	6384	8499.4 ± 1751.2
CPUE	0.30	0.33	0.27	0.33	0.24	0.23	0.29 ± 0.06
Exploits River (main stem + mid brook)							
Catch	1519	527	1809	1434	948	846	1247.4 ± 630.8
Effort	8680	2855	6867	4461	4328	2990	5438.2 ± 2872.2
CPUE	0.17	0.18	0.26	0.32	0.22	0.28	0.23 ± 0.08
Total river:							
Catch	1733	1353	2424	2998	2057	1935	2113.0 ± 786.5
Effort	9630	5079	9459	8600	8123	5891	8178.2 ± 2283.9
CPUE	0.18	0.27	0.26	0.35	0.25	0.33	0.26 ± 0.08
Terra Nova River (lower + between fishway)							
Catch	-	390	388	581	485	464	461.0 ± 146.2
Effort	-	1658	1259	1461	1234	1583	1403.0 ± 315.1
CPUE	-	0.24	0.31	0.40	0.39	0.29	0.33 ± 0.13
Total river:							
Catch	-	529	636	751	620	546	634.0 ± 145.0
Effort	-	2157	2042	1810	1485	1764	1873.5 ± 471.7
CPUE	-	0.25	0.31	0.41	0.42	0.31	0.34 ± 0.13

Table 7. Counts of grilse from fishways and counting fences in insular Newfoundland 1955-87 by Salmon Fishing Area (SFA); also shown are means ($\bar{x}$), standard deviations (SD), and coefficients of variation (CV).

	Fishways									Counting fences			
	SFA 4				SFA 5			SFA 10	SFA 11	SFA 9			
Year	1	2A	2B	3	4	5	6	7	8	9	10	11	12
1955							53						
1956					324[a]	558	32						
1957				642	28[a]	141	21						
1958	843			1072	332[a]	677	10						
1959	438	886[a]		591	295[a]	394	120						
1960	494	1013	94	291		490	86						
1961	153	839	319	41		318	74						
1962			1037			496	284						
1963	267	1202	491			551	372						
1964	1199		1752			419	246						
1965	394	1228	587			474	334						
1966	292	829[a]	942			368	134						
1967	116	1372	822			613	373						
1968	682		1334			715	409	57[a]					
1969	222	979	892			658	463						
1970	392		1023			754	563						
1971	364	961	902	714		580	316	159					
1972	112	794	495[a]	541	838	609	330	236					
1973	714	205		970	1079[a]	455	340	399[a]					
1974	616	2583		862	770[a]		161	224					
1975	788	9010	6012		1119[a]		782	186[a]					
1976	353	4106	3037				346	294					
1977	1307	6058	4294				371						
1978	1125	3757	2633	755	1412	810	436	390					
1979	2959	6693	3923	404	1283[a]	569	455	454					
1980	1760		4550	997	1703	842	422	433					
1981	2696[a]	9015[a]	4286	2459	2415	1115	619	334[a]					
1982	2149	7654[a]	2836	1425	1281	963	625	86[a]				133	198[a]
1983	2205[a]		3031[a]	978	1195	1210	853	233		2330		272	925[a]
1984	1346[a]	17389	6398[a]	1081	1379	1232	911	419		2430	89	359	1220
1985	2074	16648	5987	1663	904	1557	960	384		1377[a]	124	170	437[a]
1986	2091	9674	3065	1064	1036	1051	726	725	211	2500	158	296	893
1987	407	8977	2316	493	914	974	570	325	155	1307	91	368	612
1977-86													
$\bar{x}$	1971.2	9611.0	4100.3	1202.9	1400.9	1038.8	637.8	384.2					
SD	596.7	4922.4	1295.8	592.1	443.1	286.9	217.3	172.8					
CV	30.27	51.22	31.60	49.20	31.63	27.61	34.07	44.98					
1982-86													
$\bar{x}$	1973.0	12841.2	4263.4	1242.2	1159.0	1202.6	815.0	369.4				246.0	734.6
SD	354.3	4902.8	1769.2	290.7	190.2	227.4	137.6	238.8				92.9	410.3
CV	17.96	38.18	41.50	23.40	16.41	18.91	16.88	64.65				37.76	55.85

1 Indian Brook
2 Exploits River
  (a) Bishop's Falls
  (b) Gt. Rattling Brook
3 Gander River (Salmon Brook)
4 Middle Brook
5 L. Terra Nova River
6 U. Terra Nova River
7 Northeast River (Placentia)
8 Grand Bank Brook
9 Biscay Bay River
10 Northeast Brook (Trepassey)
11 Colinet River
12 Little Salmonier River

[a]Partial counts.

Table 8. Counts of large salmon at fishways and counting fences in Insular Newfoundland 1955-87 by Salmon Fishing Area (SFA); also shown are means ($\bar{x}$), standard deviations (SD), and coefficients of variation (CV).

	Fishways									Counting fences			
	SFA 4				SFA 5			SFA 10	SFA 11	SFA 9			
Year	1	2A	2B	3	4	5	6	7	8	9	10	11	12
1955							24						
1956					56[a]	36	44						
1957				323	2[a]	41	1						
1958	80			502	231[a]	195	0						
1959	18	119[a]		290	13[a]	67	20						
1960	25	157	9	183		217	0						
1961	1	118	53	15		99	1						
1962			31			275	4						
1963	22	65	37			320	35						
1964	45		116			297	18						
1965	0	203[a]	190			254	51						
1966	3	506[a]	470			220	2						
1967	0	710	382			359	42						
1968	0		687			374	28	11[a]					
1969	3	498	290			393	136						
1970	0		199			470	170						
1971	0	300	261	494		277	121	21					
1972	0	113	234[a]	53	10	348	202	34					
1973	3	89		135	9[a]	299	222	64[a]					
1974	8	411		8	77[a]		122	9					
1975	11	1441	544		9[a]		48	36[a]					
1976	3	493	121				37	56					
1977	23	584	221				262						
1978	13	302	78	52	16	20	88	32					
1979	113	276	119	6	54[a]	170	30	37					
1980	25		418	15	91	40	15	34					
1981	151[a]	1695[a]	514	33	38	90	28	62[a]					
1982	67	133[a]	123	18	20	19	8	36[a]				116	239[a]
1983	48[a]		223[a]	12	75	57	76	22		88		43	197[a]
1984	19[a]	355	111[a]	38	57	107	98	44		83[a]	33	97	295
1985	27	181	38	26	27	112	60	0		21[a]	41	42	87[a]
1986	12	353	174	12	15	140	58	39	4	101	30	31	133
1987	3	310	41	9	19	56	38	16	2	106	30	55	72
1977-86													
$\bar{x}$	49.8	484.9	201.9	23.6	43.7	83.9	72.3	34.0					
SD	47.3	507.3	152.5	15.0	27.3	53.5	73.4	16.7					
CV	94.98	104.62	75.53	63.56	62.47	63.77	101.5	49.12					
1982-86													
$\bar{x}$	34.6	255.5	133.8	21.2	38.8	87.0	60.0	28.2				65.8	190.2
SD	22.6	115.4	69.6	11.0	26.0	48.4	33.2	17.8				38.0	82.7
CV	65.32	45.17	52.02	51.89	67.0	55.63	55.33	63.12				57.75	43.48

1 Indian Brook
2 Exploits River
  (a) Bishop's Falls
  (b) Gt. Rattling Brook
3 Gander River (Salmon Brook)
4 Middle Brook
5 L. Terra Nova River
6 U. Terra Nova River
7 Northeast River (Placentia)
8 Grand Bank Brook
9 Biscay Bay River
10 Northeast Brook (Trepassey)
11 Colinet River
12 Little Salmonier River

[a]Partial counts.

Table 9. Atlantic salmon commercial catch data (weight in metric tonnes) for 1974-87 for Statistical Sections 2-5; means, standard deviations, and 95% confidence limits for 1977-86 and 1982-86 are included.

Year	Section 2			Section 3			Section 4			Section 5		
	Small	Large	Total	Small	Large	Total	Small	Large	Total	Small	Large	Total
1974	16.7	41.7	58.4	19.1	6.9	26.0	22.3	28.6	50.9	8.1	6.1	14.2
1975	16.6	57.8	74.4	22.7	11.1	33.8	71.4	47.5	118.8	8.3	4.5	12.8
1976	18.5	51.1	69.6	31.5	19.5	51.0	104.6	87.5	192.1	14.2	16.2	30.3
1977	24.3	80.1	104.4	21.5	27.0	48.5	59.1	106.6	165.7	17.5	26.8	44.3
1978	6.5	19.5	26.0	8.2	7.8	16.0	25.9	48.8	74.7	8.2	5.9	14.2
1979	32.7	17.3	50.0	30.6	5.6	36.2	122.6	35.2	157.8	18.0	6.9	24.9
1980	17.6	35.6	53.3	32.2	22.6	54.7	69.3	74.2	143.5	47.6	33.0	80.5
1981	35.8	40.9	76.8	31.9	18.1	50.0	87.4	79.7	167.1	18.8	36.3	55.1
1982	23.5	20.1	43.6	20.6	13.1	33.8	37.5	32.2	69.7	29.2	13.8	43.1
1983	8.5	18.8	27.3	16.5	9.6	26.1	60.8	51.5	112.3	14.2	13.8	28.0
1984	3.2	9.3	12.5	6.6	7.6	14.2	30.9	51.3	82.2	12.4	12.2	24.6
1985	15.5	13.1	28.6	12.6	4.7	17.3	41.6	27.7	69.3	2.8	4.5	7.3
1986	24.1	25.6	49.7	14.4	6.8	21.2	52.1	46.1	98.2	11.8	11.0	22.8
1987	65.0	72.3	137.3	32.9	19.0	51.9	75.8	71.5	147.3	14.8	15.9	30.7
Means, standard deviations and confidence intervals (1977-86):												
Mean	19.17	28.03	47.22	19.51	12.29	31.80	58.72	55.33	114.05	18.05	16.42	34.48
SD	10.93	20.68	27.10	9.55	7.74	15.17	29.17	24.59	40.89	12.53	11.46	21.68
95% LCL	11.35	13.24	27.84	12.68	6.75	20.95	37.85	37.74	84.80	9.09	8.22	18.97
95% UCL	26.99	42.82	66.60	26.34	17.83	42.65	79.59	72.92	143.30	27.01	24.62	49.99
Means, standard deviations and confidence intervals (1982-86):												
Mean	14.96	17.38	32.34	14.14	8.36	22.52	44.58	41.76	86.34	14.08	11.06	25.16
SD	9.18	6.34	14.67	5.16	3.18	7.72	11.89	11.11	18.70	9.54	3.85	12.79
95% LCL	3.56	9.51	14.13	7.73	4.41	12.94	29.82	27.97	63.12	2.24	6.28	9.28
95% UCL	26.36	25.25	50.55	20.55	12.31	32.10	59.34	55.55	109.56	25.92	15.84	41.04

Table 10. Atlantic salmon commercial catch data (weight in metric tonnes) for 1974-87 for statistical sections 51 and 52; means, standard deviations, and 95% confidence limits for 1977-86 and 1982-86 are included.

	Section 51			Section 52		
Year	Small	Large	Total	Small	Large	Total
1974	63	388	451	19	101	119
1975	79	224	303	55	129	184
1976	64	232	297	43	152	195
1977	47	232	279	45	151	197
1978	17	172	189	11	79	90
1979	30	62	92	35	79	114
1980	85	252	337	83	215	298
1981	96	195	292	108	220	328
1982	70	171	241	56	125	181
1983	34	96	130	37	82	119
1984	16	84	100	17	61	78
1985	28	57	85	26	28	54
1986	50	104	154	52	102	154
1987	66	147	213	62	97	160
Means, standard deviations and confidence intervals (1977-86):						
Mean	47.30	142.50	189.90	47.00	114.20	161.30
SD	28.01	70.94	91.99	29.83	63.90	91.74
95% LCL	27.26	91.75	124.10	25.66	68.49	95.67
95% UCL	67.34	193.25	255.70	68.34	159.91	226.93
Means, standard deviations and confidence intervals (1982-86):						
Mean	39.60	102.40	142.00	37.60	79.60	117.20
SD	20.95	42.28	61.45	16.62	37.34	52.34
95% LCL	13.59	49.92	65.72	16.96	33.24	52.22
95% UCL	65.61	154.88	218.28	58.24	125.96	182.18

Table 11. Closure dates of fishway and counting fence operations, insular Newfoundland, 1987.

Fishways	
SFA 4	
Indian Brook	October 9
Exploits River	
Bishop Falls	September 18
Great Rattling Brook	September 25
Gander River	
Salmon Brook	October 16
SFA 5	
Middle Brook	September 19
Lower Terra Nova	September 18
Upper Terra Nova	October 3
SFA 10	
Northeast River, Placentia	September 18
SFA 11	
Grand Bank Brook	September 25
Counting Fences	
SFA 9	
Biscay Bay River	September 28
Northeast Brook, Trepassey	October 13
Colinet River	September 14
Little Salmonier River	September 27

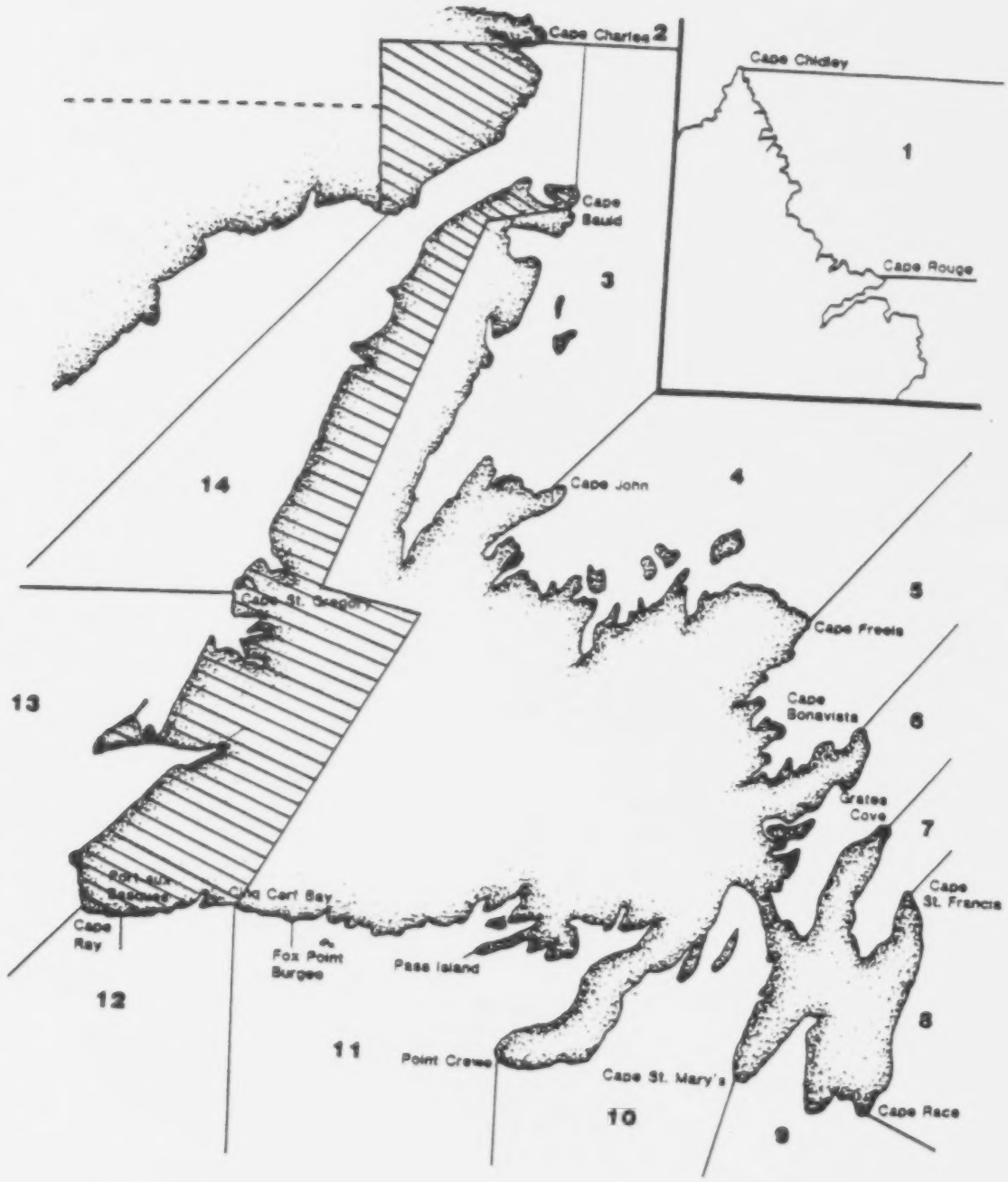

Fig. 1. Boundaries of Salmon Fishing Areas in insular Newfoundland and Labrador. Cross-hatched portion denotes area belonging to the Gulf Region.

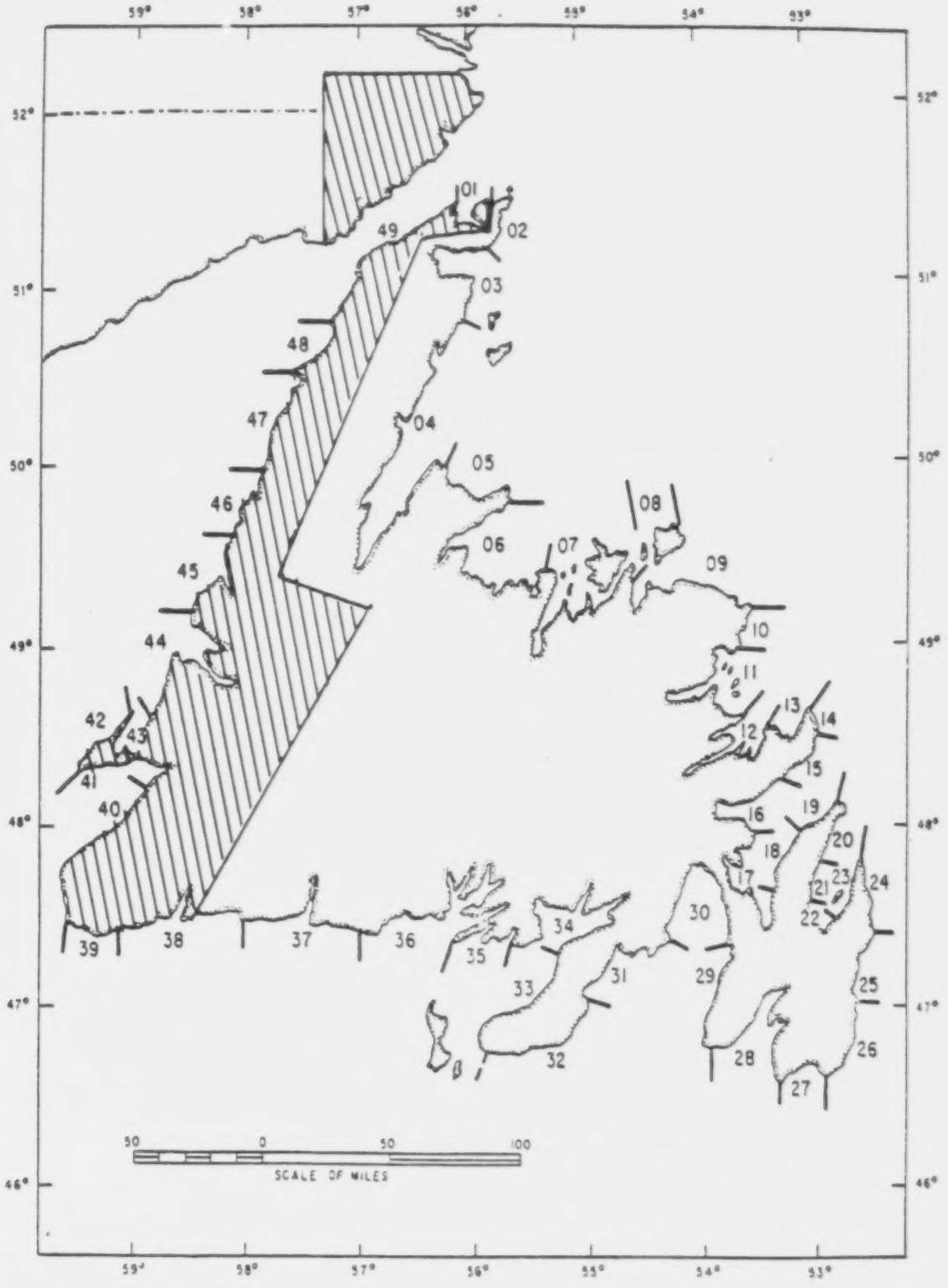

Fig. 2. Boundaries of Statistical Sections in insular Newfoundland. Cross-hatched portion denotes area belonging to the Gulf Region.

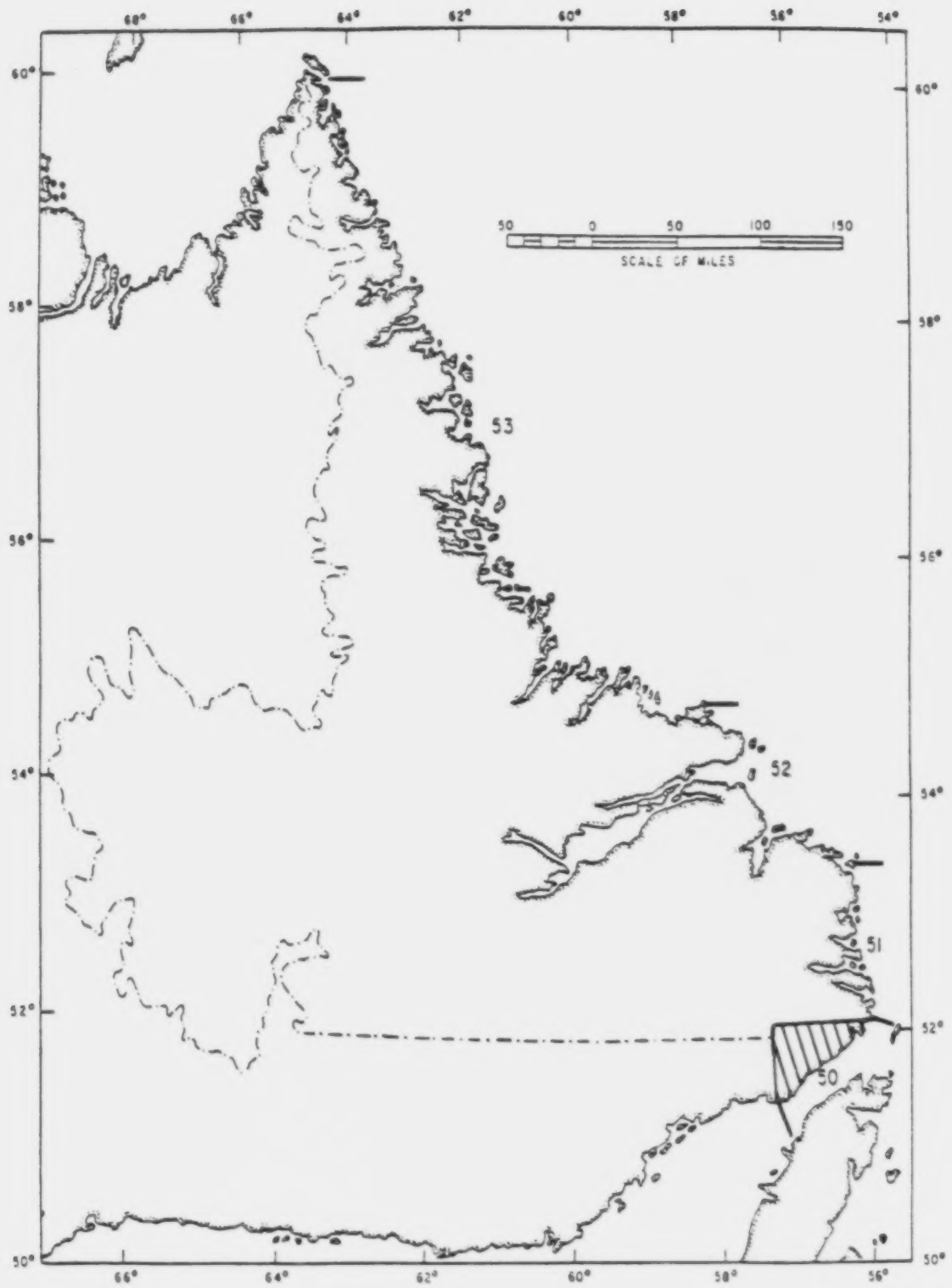

Fig. 3. Boundaries of Statistical Sections in Labrador. Cross-hatched portion denotes area belonging to the Gulf Region.

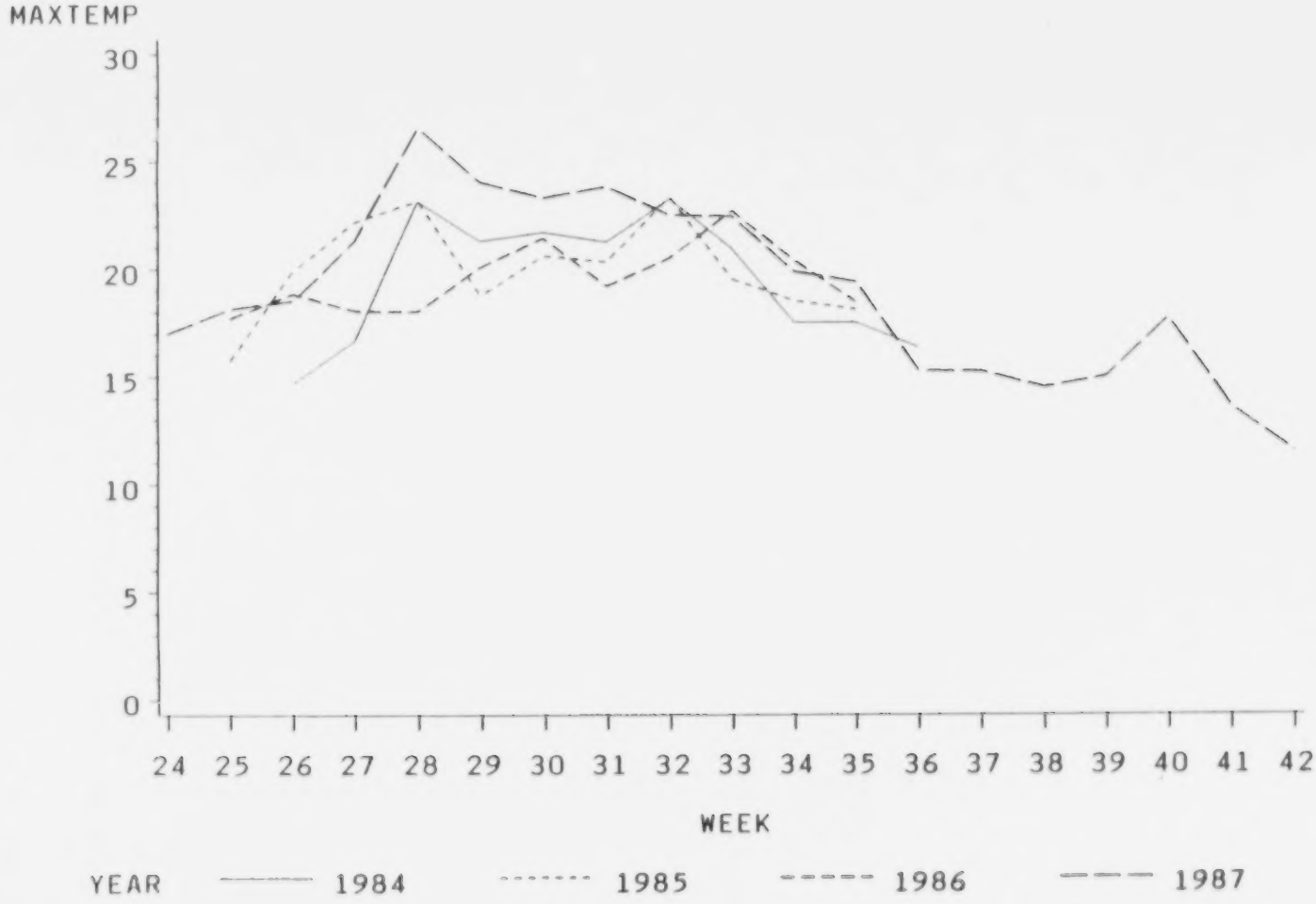

Fig. 4a. Average maximum water temperatures (°C) by standardized week (see text) for Salmon Brook fishway, 1984-87.

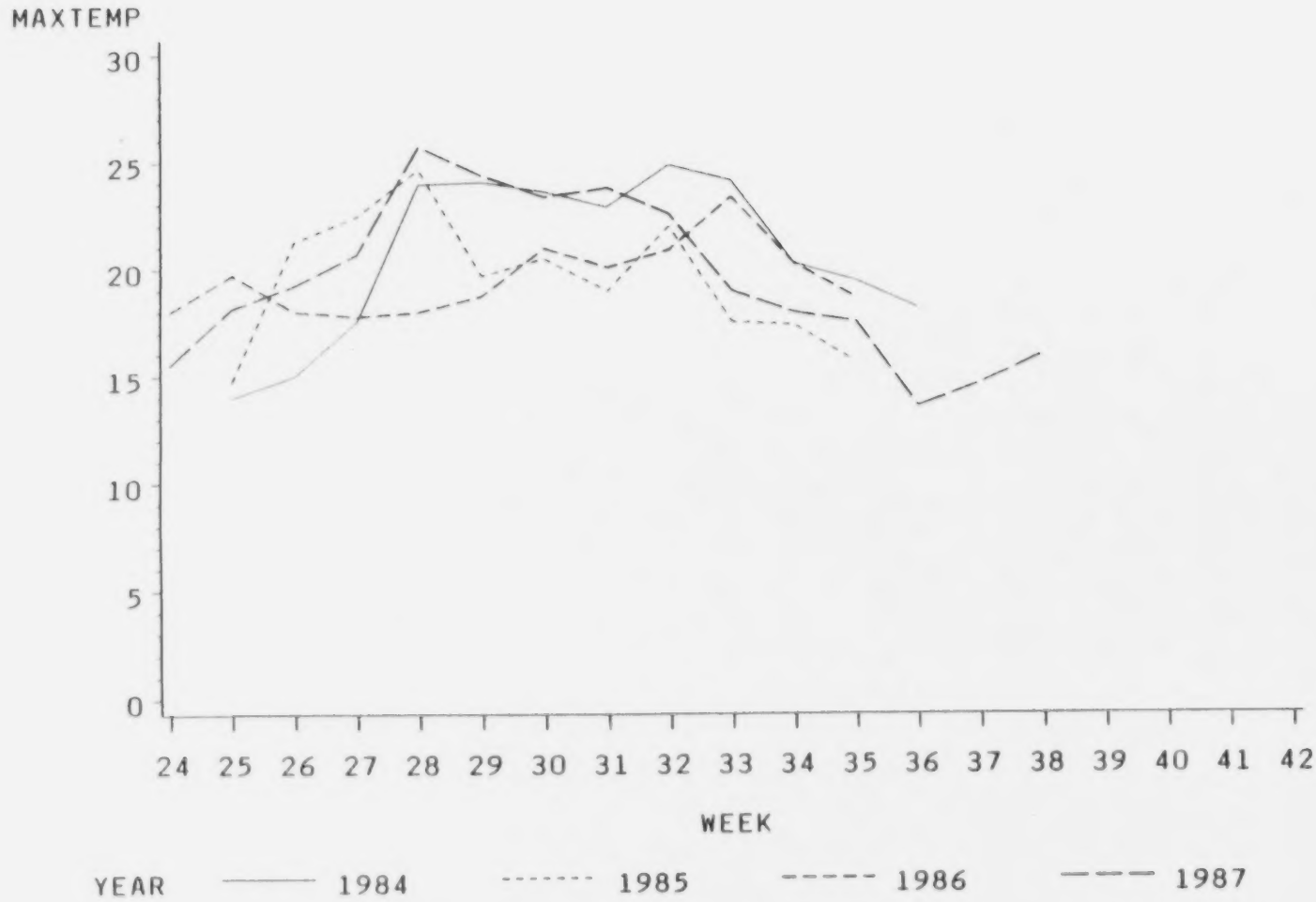

Fig. 4b. Average maximum water temperatures (°C) by standardized week (see text) for Middle Brook fishway, 1984-87.

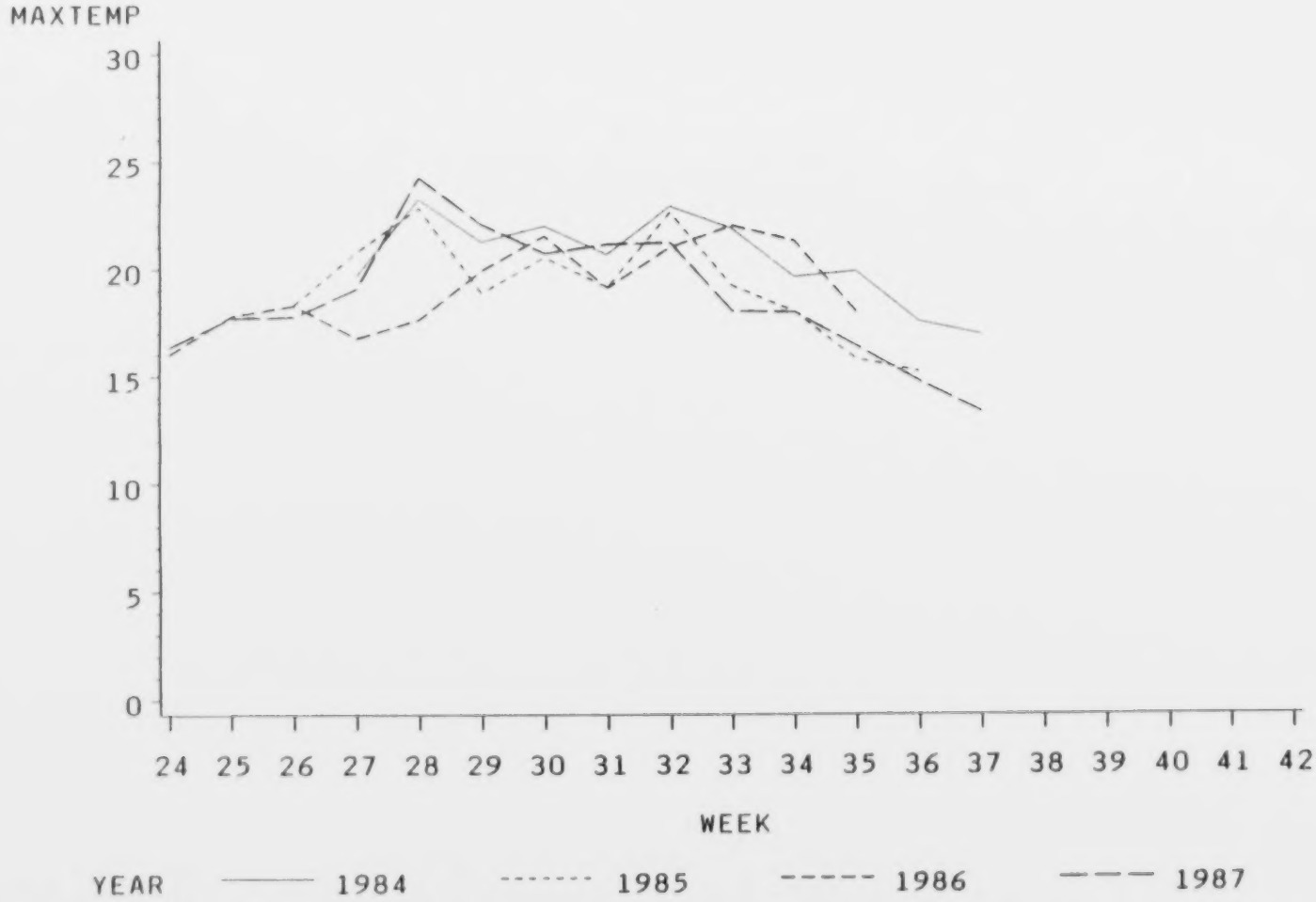

Fig. 4c. Average maximum water temperatures (°C) by standardized week (see text) for Lower Terra Nova River fishway, 1984-87.

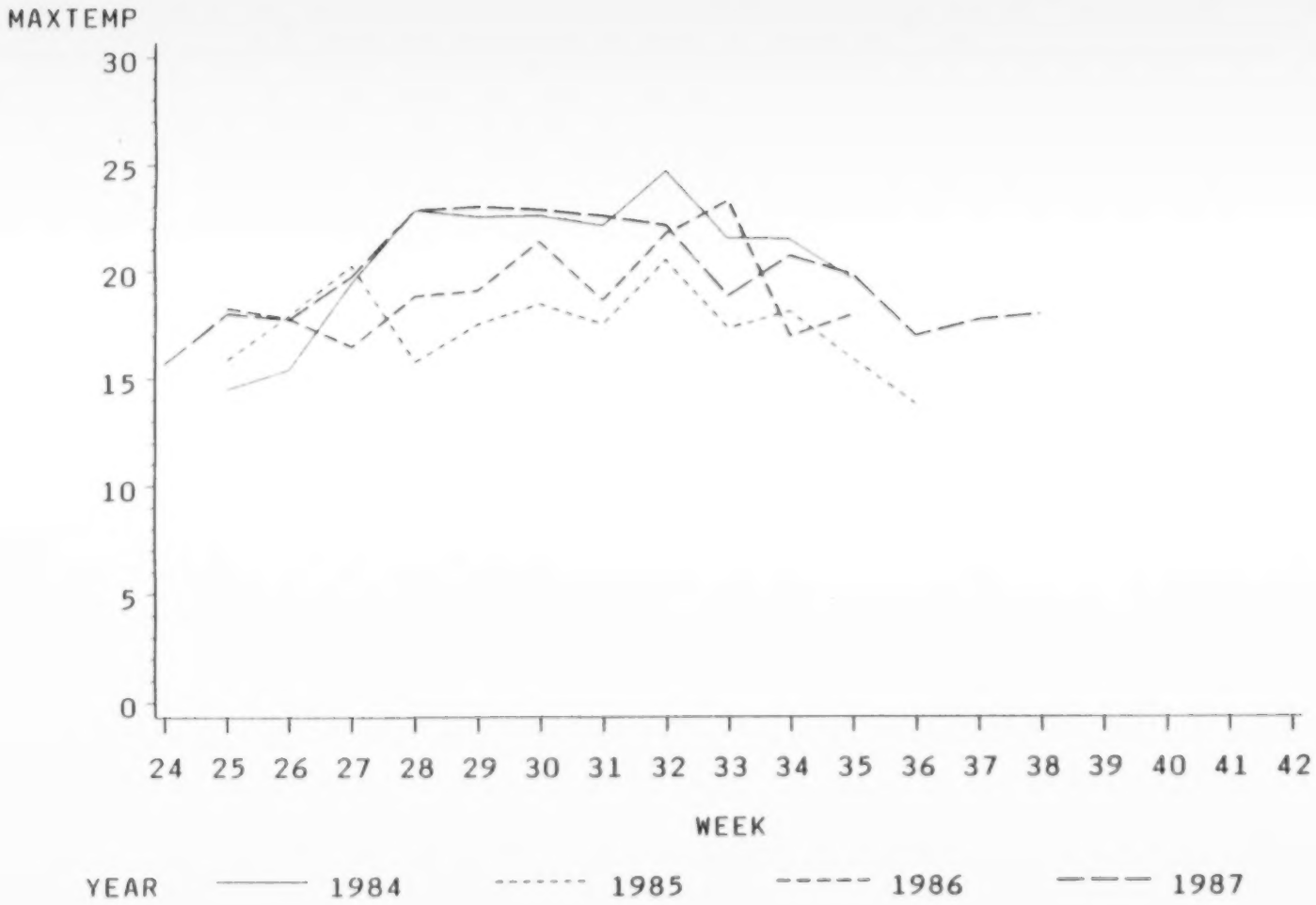

Fig. 4d. Average maximum water temperatures (°C) by standardized week (see text) for Northeast River (Placentia) fishway, 1984-87.

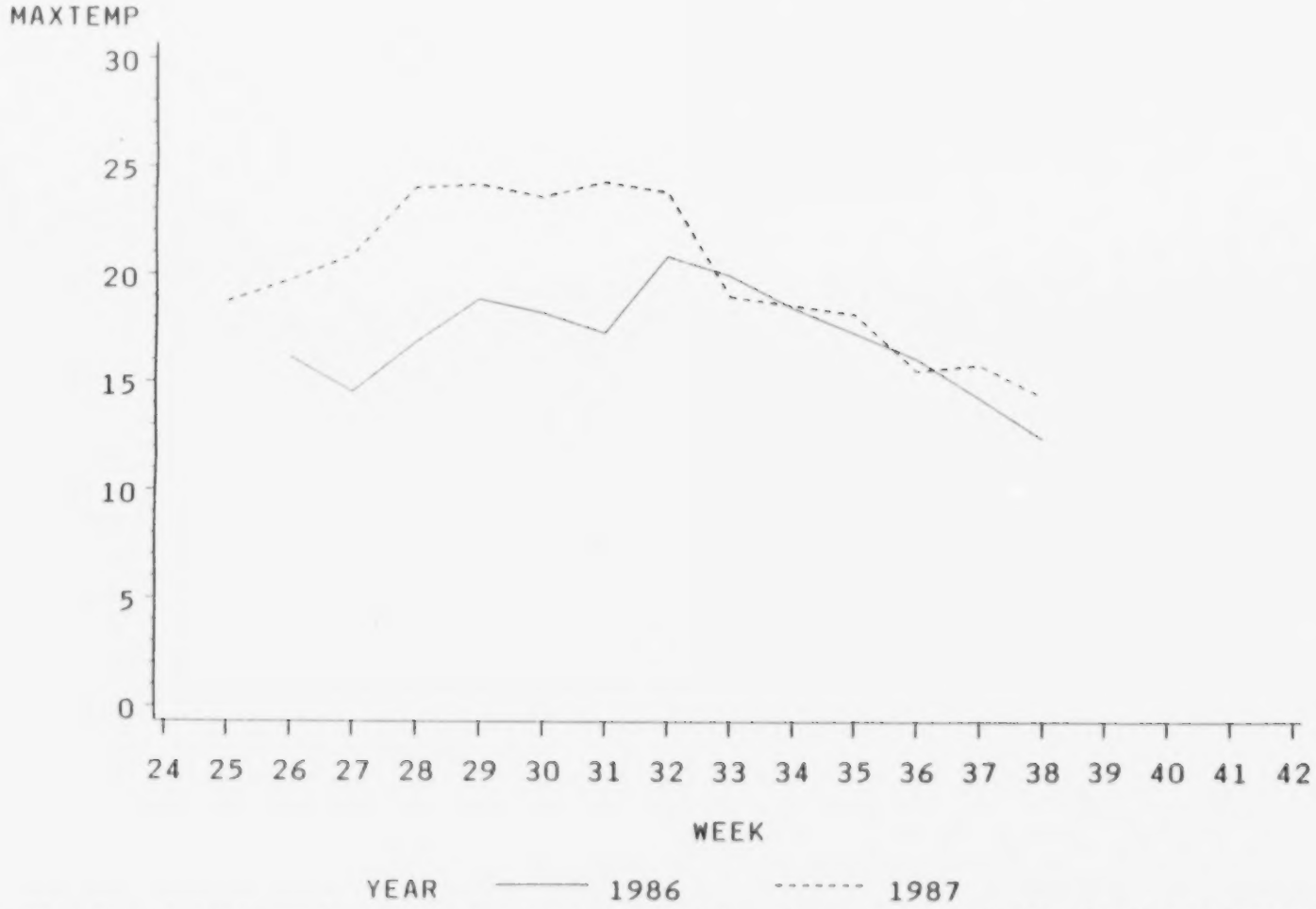

Fig. 4e. Average maximum water temperatures (°C) by standardized week (see text) for Grand Bank Brook fishway, 1984-87.

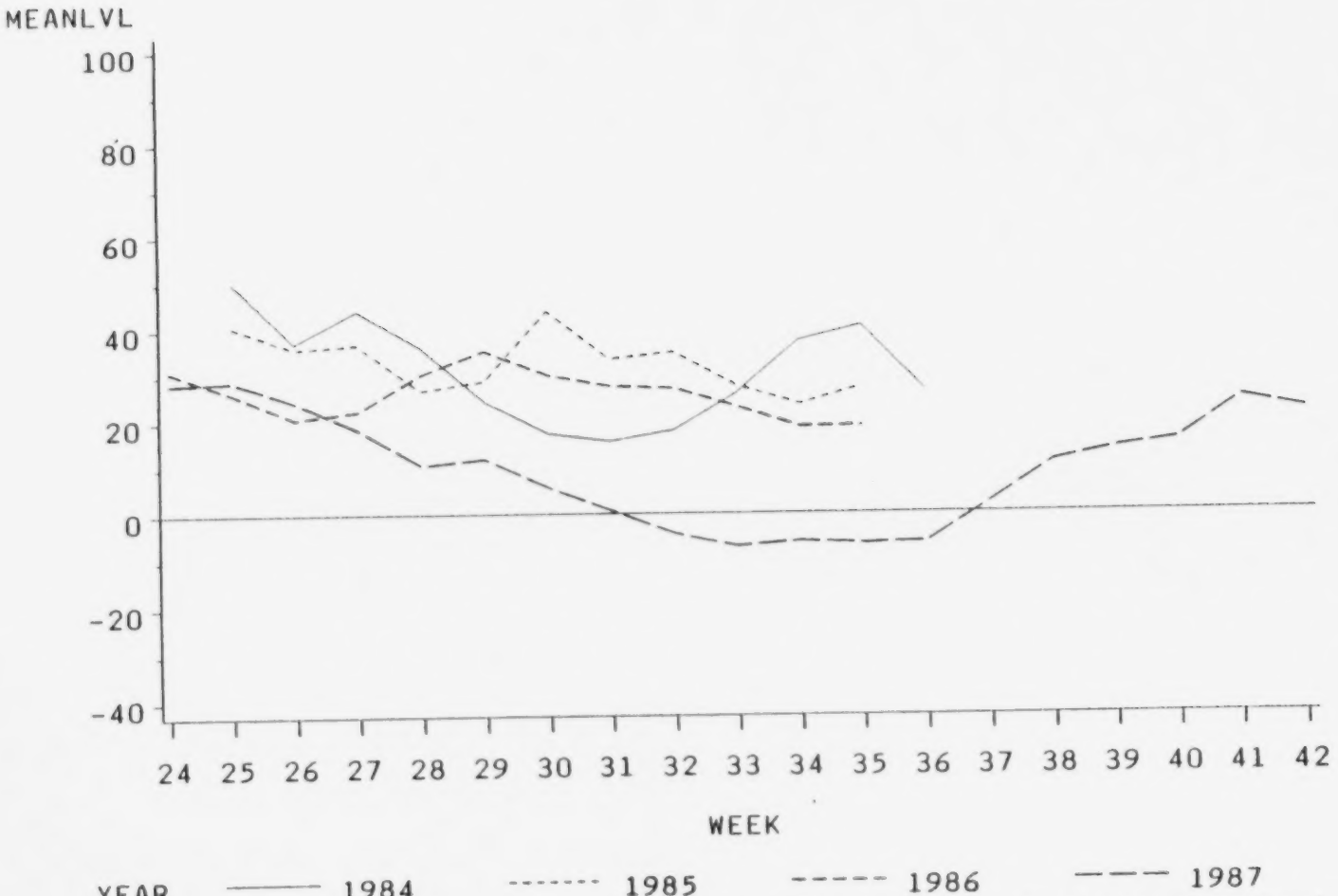

Fig. 5a. Average maximum water levels (cm) by standardized week (see text) for Salmon Brook fishway, 1984-87.

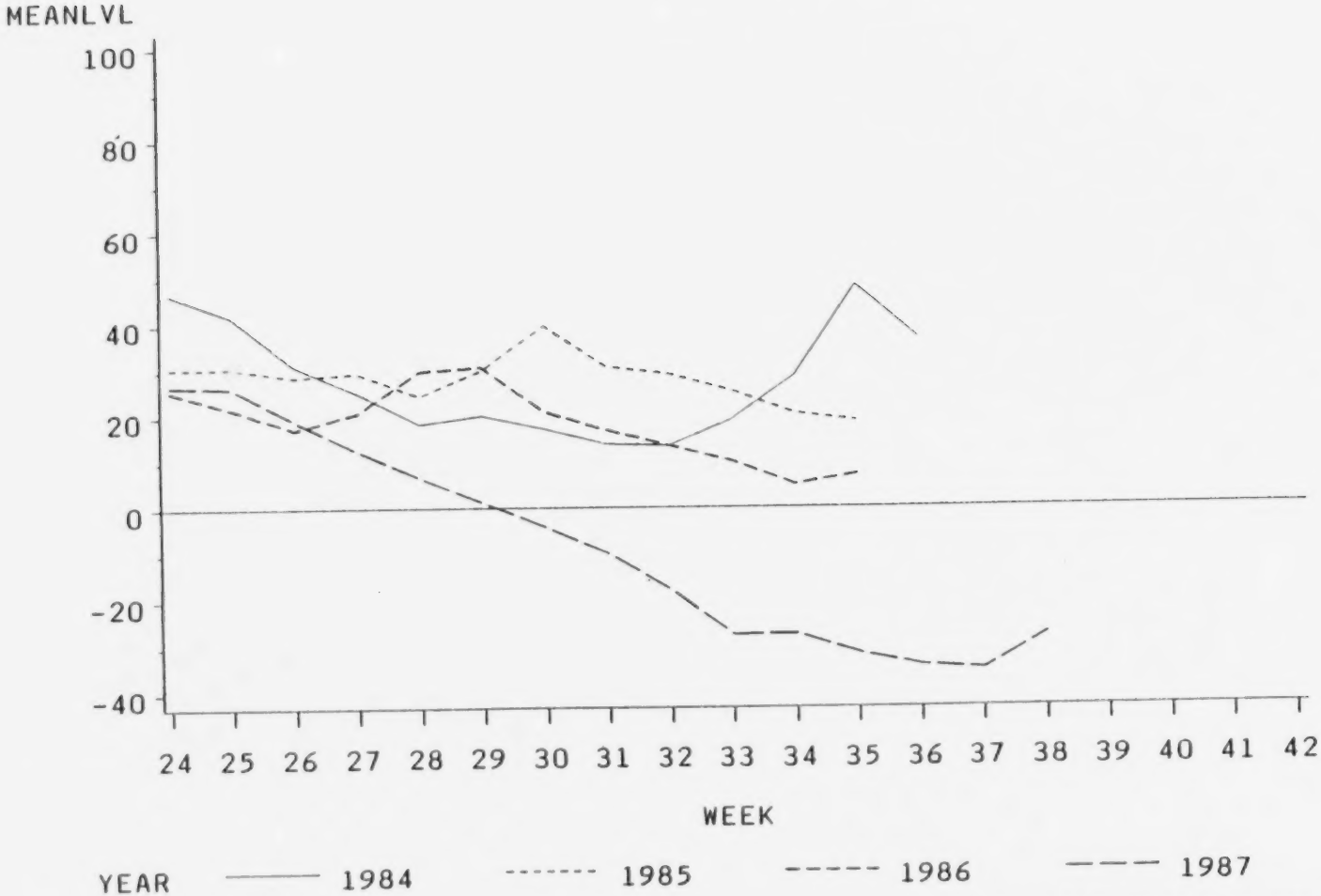

Fig. 5b. Average maximum water levels (cm) by standardized week (see text) for Middle Brook fishway, 1984-87.

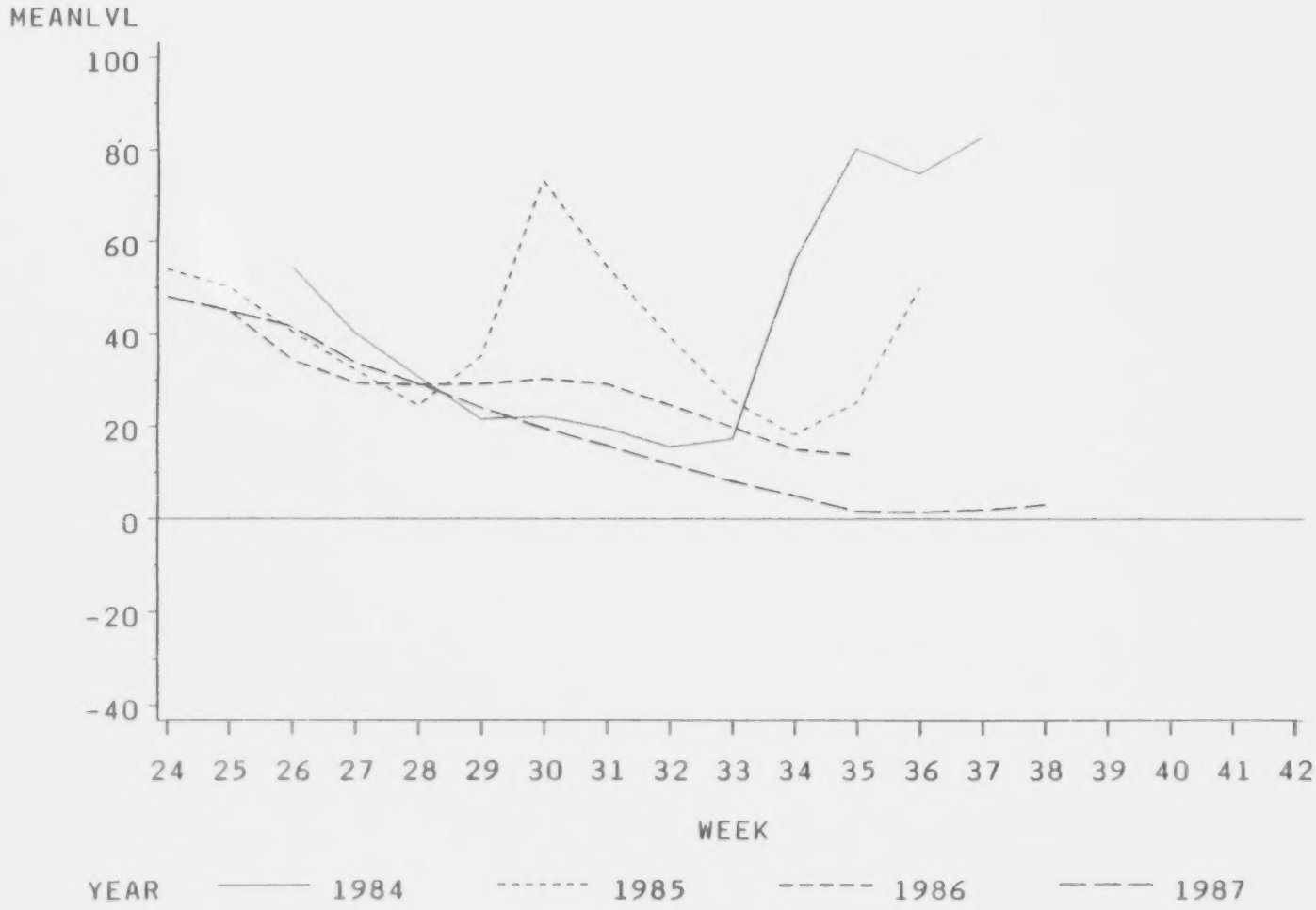

Fig. 5c. Average maximum water levels (cm) by standardized week (see text) for Terra Nova River fishway, 1984-87.

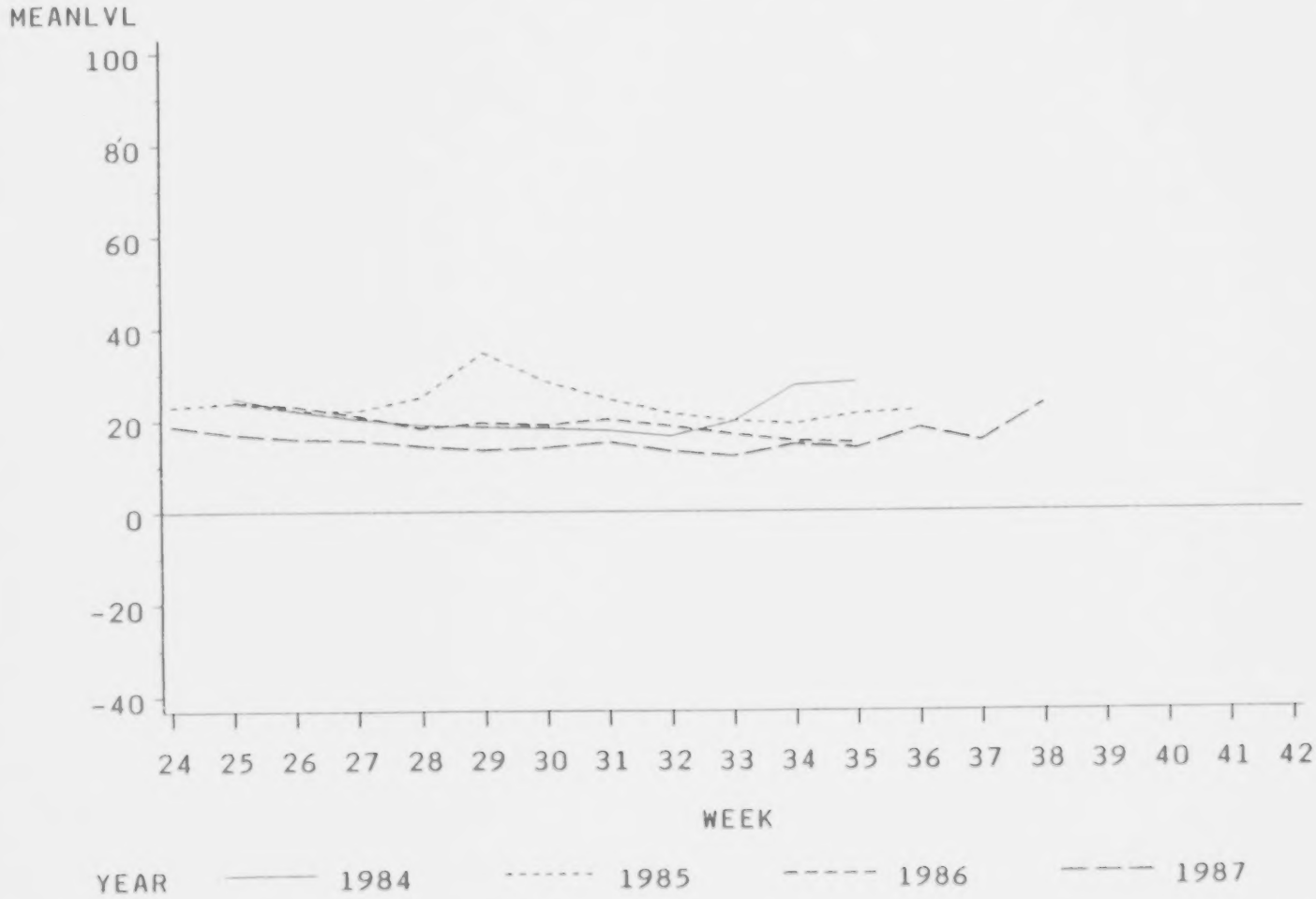

Fig. 5d. Average maximum water levels (cm) by standardized week (see text) for Northeast River (Placentia) fishway, 1984-87.

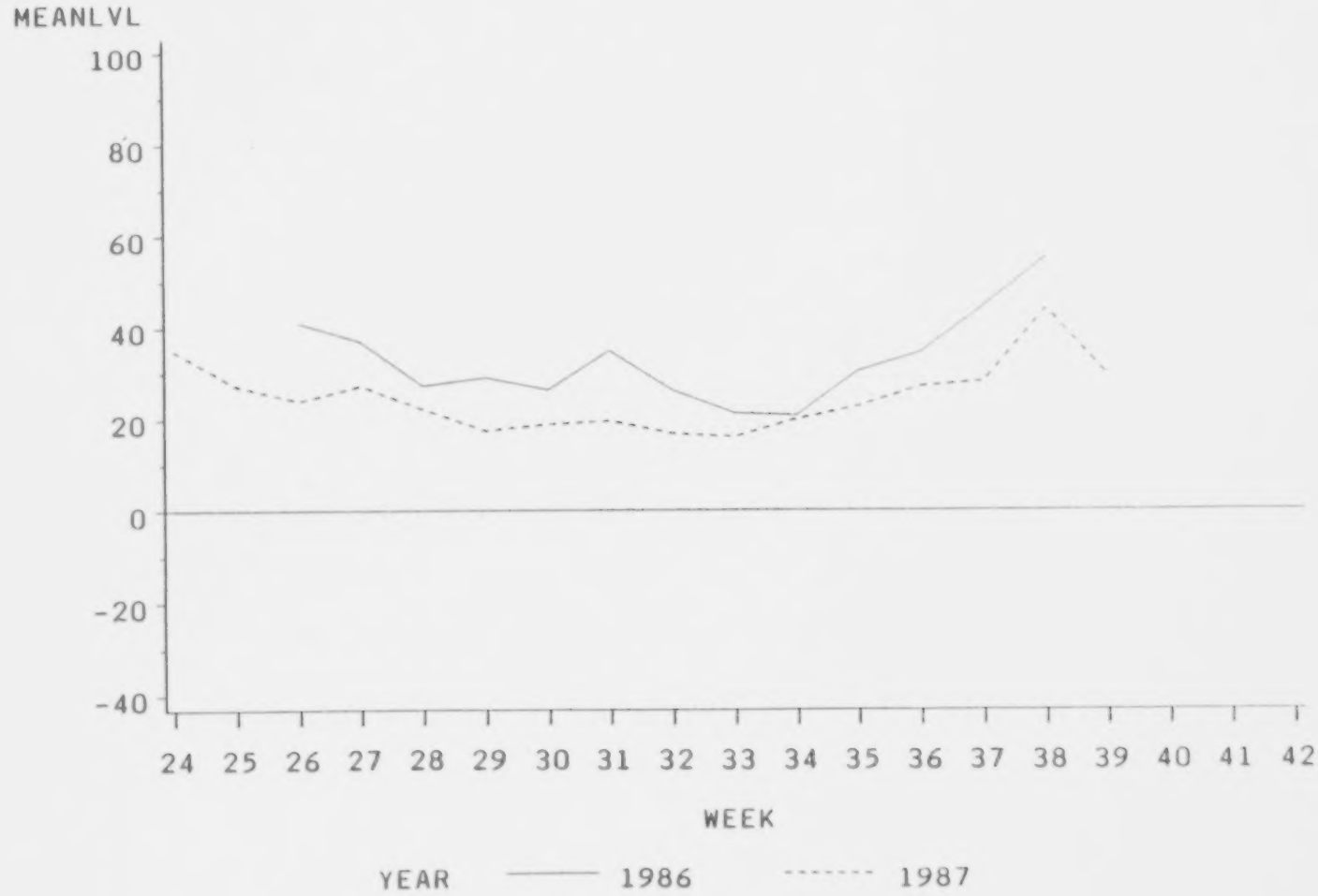

Fig. 5e. Average maximum water levels (cm) by standardized week (see text) for Grand Bank Brook fishway, 1984-87.

Appendix 1a. Summary of commercial Atlantic salmon catch and effort data for the entire Newfoundland Region, 1974-87. Weight in metric tonnes.

NFLD. & LABRADOR (NFLD REGION)

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	526	278365	1110	230366	1634	508731	32.19	54.72	17228
1975	642	338395	1070	238121	1711	576516	37.52	58.70	21733
1976	509	264809	1071	240523	1583	505332	32.15	52.40	20500
1977	469	237608	1132	237173	1603	474781	29.26	50.05	18793
1978	227	116489	755	160081	980	276570	23.16	42.12	19326
1979	415	206668	408	91805	820	298473	50.61	69.24	19213
1980	707	335112	1117	229547	1822	564659	38.80	59.35	19092
1981	603	309090	1094	221341	1699	530431	35.49	58.27	18244
1982	506	261102	632	139315	1135	400417	44.58	65.21	16145
1983	354	186314	508	113457	864	299771	40.97	62.15	16892
1984	294	154506	418	91560	711	246066	41.35	62.79	13471
1985	423	231115	378	87578	801	318693	52.81	72.52	12216
1986	518	263367	553	113922	1071	377289	48.37	69.81	12188
1987[1]	570	292346	662	140049	1232	432395	46.27	67.61	12111
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	451.60	230137.10	699.50	148577.90	1150.60	378715.00	*39.25	*60.77	16558.00
S.D.:	142.51	67065.75	307.38	60136.31	408.08	111354.06	* 1.62	* 1.61	2919.88
95% LCL:	349.66	182164.49	479.63	105561.97	858.70	299062.64	*35.39	*56.95	14469.39
95% UCL:	553.54	278109.71	919.37	191593.83	1442.50	458367.36	*43.11	*64.59	18646.61
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	419.00	219280.80	497.80	109166.40	916.40	328447.20	*45.72	*66.76	14182.40
S.D.:	96.48	47736.88	102.32	20772.62	180.24	61784.51	* 2.59	* 2.31	2210.44
95% LCL:	299.22	160017.14	370.77	83377.92	692.64	251743.89	*40.64	*62.24	11438.22
95% UCL:	538.78	278544.46	624.83	134954.88	1140.16	405150.51	*50.81	*71.28	16926.58

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1b. Summary of commercial Atlantic salmon catch and effort data for the insular portion of Newfoundland Region, 1974-87. Weight in metric tonnes.

INSULAR NEWFOUNDLAND (NFLD REGION)

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	432	231372	586	123464	1017	354836	42.48	65.21	15040
1975	466	245898	641	138352	1106	384250	42.13	63.99	19013
1976	372	199752	548	124172	922	323924	40.35	61.67	17533
1977	352	179273	651	138857	1004	318130	35.06	56.35	15928
1978	171	86859	380	80323	550	167182	31.09	51.95	16158
1979	334	168148	195	43441	526	211589	63.50	79.47	15990
1980	498	240126	538	113730	1034	353856	48.16	67.86	16116
1981	379	201068	556	116613	936	317681	40.49	63.29	15315
1982	362	189032	270	62038	629	251070	57.55	75.29	13271
1983	263	140165	269	60734	534	200899	49.25	69.77	13933
1984	244	130685	239	53617	482	184302	50.62	70.91	11008
1985	348	191216	242	57537	590	248753	58.98	76.87	9878
1986	392	200267	282	60699	674	260966	58.16	76.74	9916
1987[1]	429	221062	356	77415	784	298477	54.72	74.06	9784
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	334.30	172683.90	362.20	78758.90	695.90	251442.80	*48.04	*68.68	13751.30
S.D.:	90.25	43431.83	161.03	32541.64	212.18	62513.98	* 1.63	* 1.36	2605.13
95% LCL:	269.75	141616.80	247.01	55481.63	544.13	206726.10	*44.17	*65.44	11887.83
95% UCL:	398.85	203751.00	477.39	102036.17	847.67	296159.50	*51.90	*71.92	15614.77
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	321.80	170273.00	260.40	58925.00	581.80	229198.00	*55.31	*74.29	11601.20
S.D.:	64.69	32263.95	18.90	3398.96	75.90	34228.91	* 1.53	* 1.22	1896.49
95% LCL:	241.49	130218.43	236.93	54705.31	487.58	186704.01	*52.31	*71.91	9246.77
95% UCL:	402.11	210327.57	283.87	63144.69	676.02	271691.99	*58.31	*76.67	13955.63

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1c. Summary of Atlantic salmon catch and effort data for the Labrador portion of Newfoundland Region, 1974-87. Weight in metric tonnes.

LABRADOR (NFLD REGION)

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	94	46993	524	106902	617	153895	15.24	30.54	2188
1975	176	92497	429	99769	605	192266	29.09	48.11	2720
1976	137	65057	523	116351	661	181408	20.73	35.86	2967
1977	117	58335	481	98316	599	156651	19.53	37.24	2865
1978	56	29630	375	79758	430	109388	13.02	27.09	3168
1979	81	38520	213	48364	294	86884	27.55	44.33	3223
1980	209	94986	579	115817	788	210803	26.52	45.06	2976
1981	224	108022	538	104728	763	212750	29.36	50.77	2929
1982	144	72070	362	77277	506	149347	28.46	48.26	2874
1983	91	46149	239	52723	330	98872	27.58	46.68	2959
1984	50	23821	179	37943	229	61764	21.83	38.57	2463
1985	75	39899	136	30041	211	69940	35.55	57.05	2338
1986	126	63100	271	53223	397	116323	31.74	54.25	2272
1987[1]	141	71284	306	62634	448	133918	31.47	53.23	2327
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	117.30	57453.20	337.30	69819.00	454.70	127272.20	*25.80	*45.14	2806.70
S.D.:	60.25	27712.58	155.09	29678.51	206.89	53841.41	* 1.24	* 1.66	333.72
95% LCL:	74.20	37630.19	226.36	48589.75	306.71	88759.05	*22.86	*41.20	2567.99
95% UCL:	160.40	77276.21	448.24	91048.25	602.69	165785.35	*28.73	*49.09	3045.41
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	97.20	49007.80	237.40	50241.40	334.60	99249.20	*29.05	*49.38	2581.20
S.D.:	38.01	19078.61	87.11	18064.32	122.19	35586.57	* 1.48	* 2.01	315.11
95% LCL:	50.01	25322.38	129.26	27815.18	182.91	55069.72	*26.14	*45.44	2190.00
95% UCL:	144.39	72693.22	345.54	72667.62	486.29	143428.68	*31.96	*53.32	2972.40

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1d. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 1, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 1

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	12	6211	35	7113	47	13324	25.53	46.62	288
1975	42	22105	76	17603	118	39708	35.59	55.67	556
1976	30	14124	139	30882	169	45006	17.75	31.38	549
1977	25	12363	98	20046	123	32409	20.33	38.15	612
1978	28	14530	124	26321	151	40851	18.54	35.57	1001
1979	16	7419	72	16444	88	23863	18.18	31.09	979
1980	41	18587	112	22337	153	40924	26.80	45.42	1018
1981	20	9616	123	24853	143	34469	13.99	27.90	981
1982	18	9174	66	14006	84	23180	21.43	39.58	1046
1983	20	9907	61	13239	81	23146	24.69	42.80	1080
1984	17	8043	34	7149	51	15192	33.33	52.94	992
1985	21	11054	51	11349	72	22403	29.17	49.34	936
1986	24	11794	65	12821	89	24615	26.97	47.91	848
1987[1]	13	6260	62	12823	75	19083	17.33	32.80	852
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	23.00	11248.70	80.60	16856.50	103.50	28105.20	*22.22	*40.02	949.30
S.D.:	7.35	3331.80	31.50	6289.01	36.11	8590.00	* 1.50	* 2.03	134.06
95% LCL:	17.74	8865.44	58.07	12357.93	77.67	21960.71	*18.67	*35.20	853.41
95% UCL:	28.26	13631.96	103.13	21355.07	129.33	34249.69	*25.77	*44.84	1045.19
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	20.00	9994.40	55.40	11712.80	75.40	21707.20	*26.53	*46.04	980.40
S.D.:	2.74	1487.44	13.35	2728.41	14.98	3729.16	* 1.79	* 2.22	92.00
95% LCL:	16.60	8147.79	38.82	8325.58	56.81	17077.58	*23.02	*41.68	866.18
95% UCL:	23.40	11841.01	71.98	15100.02	93.99	26336.82	*30.03	*50.40	1094.62

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1e. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 2, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 2

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	82	40782	489	99789	570	140571	14.39	29.01	1900
1975	134	70392	353	82166	487	152558	27.52	46.14	2164
1976	107	50933	384	85469	492	136402	21.75	37.34	2418
1977	92	45972	383	78270	476	124242	19.33	37.00	2253
1978	28	15100	251	53437	279	68537	10.04	22.03	2167
1979	65	31101	141	31920	206	63021	31.55	49.35	2244
1980	168	76399	467	93480	635	169879	26.46	44.97	1958
1981	204	98406	415	79875	620	178281	32.90	55.20	1948
1982	126	62896	296	63271	422	126167	29.86	49.85	1828
1983	71	36242	178	39484	249	75726	28.51	47.86	1879
1984	33	15778	145	30794	178	46572	18.54	33.88	1471
1985	54	28845	85	18692	139	47537	38.85	60.68	1402
1986	102	51306	206	40402	308	91708	33.12	55.94	1424
1987[1]	128	65024	244	49811	373	114835	34.32	56.62	1475
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	94.30	46204.50	256.70	52962.50	351.20	99167.00	*26.85	*46.59	1857.40
S.D.:	57.46	26798.36	129.50	24857.47	178.58	48187.95	* 1.47	* 1.95	327.62
95% LCL:	53.20	27035.44	164.07	35181.77	223.46	64697.81	*23.35	*41.96	1623.05
95% UCL:	135.40	65373.56	349.33	70743.23	478.94	133636.19	*30.35	*51.23	2091.75
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	77.20	39013.40	182.00	38528.60	259.20	77542.00	*29.78	*50.31	1600.80
S.D.:	37.17	18523.28	78.05	16354.84	111.84	33270.88	* 1.77	* 2.41	232.72
95% LCL:	31.05	16017.40	85.11	18224.64	120.36	36237.37	*26.31	*45.60	1311.88
95% UCL:	123.35	62009.40	278.89	58832.56	398.04	118846.63	*33.25	*55.03	1889.72

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1f. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 3, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 3

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	66	33129	83	18492	149	51621	44.30	64.18	2371
1975	119	59495	121	26850	240	86345	49.58	68.90	2704
1976	169	88837	174	40514	343	129351	49.27	68.68	2528
1977	122	61215	240	51168	363	112383	33.61	54.47	2364
1978	49	24384	82	17463	131	41847	37.40	58.27	2406
1979	204	101970	65	15509	269	117479	75.84	86.80	2418
1980	167	79798	165	34637	332	114435	50.30	69.73	2378
1981	174	93658	175	36148	349	129806	49.86	72.15	2309
1982	111	58977	79	17262	190	76239	58.42	77.36	2083
1983	100	55163	94	20579	194	75742	51.55	72.83	2315
1984	53	28189	81	17630	133	45819	39.85	61.52	1892
1985	73	40484	50	11394	123	51878	59.35	78.04	1750
1986	102	53685	90	18538	192	72223	53.13	74.33	1752
1987[1]	188	95457	179	38151	367	133608	51.23	71.45	1738
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	115.50	59752.30	112.10	24032.80	227.60	83785.10	*50.75	*71.32	2166.70
S.D.:	52.20	25847.42	60.53	12472.48	93.52	32462.06	* 3.69	* 2.91	273.72
95% LCL:	78.16	41263.46	68.80	15111.15	160.70	60564.76	*41.99	*64.42	1970.90
95% UCL:	152.84	78241.14	155.40	32954.45	294.50	107005.44	*59.50	*78.22	2362.50
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	87.80	47299.60	78.80	17080.60	166.40	64380.20	*52.76	*73.47	1958.40
S.D.:	24.08	12753.78	17.25	3429.10	35.26	14422.68	* 2.95	* 2.33	241.42
95% LCL:	57.91	31466.23	57.38	12823.49	122.63	46474.95	*46.98	*68.90	1658.69
95% UCL:	117.69	63132.97	100.22	21337.71	210.17	82285.45	*58.55	*78.04	2258.11

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1g. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 4, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 4

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	54	26821	52	11456	105	38277	51.43	70.07	3151
1975	142	71225	103	22950	246	94175	57.72	75.63	3962
1976	57	30249	60	14303	117	44552	48.72	67.90	3547
1977	85	44691	96	20371	181	65062	46.96	68.69	3327
1978	36	17821	68	14564	104	32385	34.62	55.03	3371
1979	45	21524	33	7403	78	28927	57.69	74.41	3349
1980	135	64024	110	24029	245	88053	55.10	72.71	3485
1981	87	44106	128	26632	215	70738	40.47	62.35	3390
1982	98	50764	69	16022	166	66786	59.04	76.01	3002
1983	74	37560	56	12789	130	50349	56.92	74.60	3729
1984	76	40292	52	11257	128	51549	59.38	78.16	3124
1985	68	37957	43	10019	111	47976	61.26	79.12	2768
1986	119	59902	81	17047	200	76949	59.50	77.85	2782
1987[1]	111	55896	73	15442	184	71338	60.33	78.35	2756
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	82.30	41864.10	73.60	16013.30	155.80	57877.40	*52.82	*72.33	3232.70
S.D.:	30.27	14669.34	30.28	6166.71	54.09	19012.92	* 2.30	* 1.73	309.19
95% LCL:	60.65	31371.02	51.94	11602.21	117.11	44277.32	*47.37	*68.23	3011.54
95% UCL:	103.95	52357.18	95.26	20424.39	194.49	71477.48	*58.28	*76.44	3453.86
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	87.00	45295.00	60.20	13426.80	147.00	58721.80	*59.18	*77.13	3081.00
S.D.:	21.19	9772.17	14.92	3023.61	35.76	12592.53	* 0.58	* 0.73	392.23
95% LCL:	60.69	33163.20	41.67	9673.10	102.60	43088.62	*58.05	*75.70	2594.07
95% UCL:	113.31	57426.80	78.73	17180.50	191.40	74354.98	*60.32	*78.57	3567.93

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1h. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 5, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 5

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	31	15344	35	7551	65	22895	47.69	67.02	2014
1975	48	28024	112	24380	160	52404	30.00	53.48	2565
1976	13	6284	44	10811	57	17095	22.81	36.76	2354
1977	38	18031	90	19150	128	37181	29.69	48.50	2163
1978	22	11578	59	12785	81	24363	27.16	47.52	2172
1979	11	5342	18	3849	28	9191	39.29	58.12	2169
1980	40	18246	47	10609	87	28855	45.98	63.23	2320
1981	28	14252	65	14366	93	28618	30.11	49.80	1944
1982	37	18607	23	6089	60	24696	61.67	75.34	1551
1983	27	13723	31	7288	58	21011	46.55	65.31	1661
1984	26	13833	34	8000	60	21833	43.33	63.36	1341
1985	41	21323	31	7518	72	28841	56.94	73.93	1122
1986	36	18044	25	6062	61	24106	59.02	74.85	1124
1987[1]	39	21528	21	5786	60	27314	65.00	78.82	1100
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	30.60	15297.90	42.30	9571.60	72.80	24869.50	*42.03	*61.51	1756.70
S.D.:	9.55	4590.23	22.80	4657.49	26.70	7211.68	* 3.58	* 3.17	457.94
95% LCL:	23.77	12014.48	25.99	6240.06	53.70	19710.94	*33.52	*53.98	1429.13
95% UCL:	37.43	18581.32	58.61	12903.14	91.90	30028.06	*50.54	*69.05	2084.27
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	33.40	17106.00	28.80	6991.40	62.20	24097.40	*53.70	*70.99	1359.80
S.D.:	6.58	3281.51	4.60	874.74	5.59	3062.41	* 3.50	* 2.45	244.84
95% LCL:	25.23	13032.12	23.08	5905.44	55.27	20295.52	*46.84	*66.19	1055.84
95% UCL:	41.57	21179.88	34.52	8077.36	69.13	27899.28	*60.55	*75.78	1663.76

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 11. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 6, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 6

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	74	39102	94	19185	168	58287	44.05	67.09	1589
1975	40	21994	67	14171	106	36165	37.74	60.82	2074
1976	21	10204	33	6648	54	16852	38.89	60.55	2074
1977	34	15236	57	11849	90	27085	37.78	56.25	1876
1978	21	10193	55	10689	76	20882	27.63	48.81	1901
1979	20	9661	9	1757	29	11418	68.97	84.61	1853
1980	29	14568	35	6919	63	21487	46.03	67.80	1834
1981	23	12843	50	10356	73	23199	31.51	55.36	1709
1982	23	12006	20	4278	43	16284	53.49	73.73	1536
1983	11	6432	18	4086	30	10518	36.67	61.15	1499
1984	19	10863	16	3678	35	14541	54.29	74.71	1160
1985	46	26911	19	4462	65	31373	70.77	85.78	1036
1986	31	16227	23	4715	54	20942	57.41	77.49	1028
1987[1]	27	14685	20	4389	47	19074	57.45	76.99	1014
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	25.70	13494.00	30.20	6278.90	55.80	19772.90	*46.06	*68.24	1543.20
S.D.:	9.72	5544.70	17.73	3484.55	21.06	6669.21	* 4.22	* 3.83	352.50
95% LCL:	18.75	9527.83	17.52	3786.37	40.73	15002.37	*36.05	*59.15	1291.05
95% UCL:	32.65	17460.17	42.88	8771.43	70.87	24543.43	*56.07	*77.34	1795.35
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	26.00	14487.80	19.20	4243.80	45.40	18731.60	*57.27	*77.34	1251.80
S.D.:	13.30	7771.02	2.59	392.38	14.22	7995.40	* 5.37	* 3.85	248.48
95% LCL:	9.48	4840.35	15.99	3756.68	27.74	8805.59	*46.74	*69.80	943.33
95% UCL:	42.52	24135.25	22.41	4730.92	63.06	28657.61	*67.80	*84.89	1560.27

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1j. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 7, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 7

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	43	21478	83	17277	126	38755	34.13	55.42	1861
1975	19	9819	56	12153	75	21972	25.33	44.69	2567
1976	15	7983	33	7042	48	15025	31.25	53.13	2276
1977	23	11318	56	11875	78	23193	29.49	48.80	1973
1978	10	4771	40	8572	50	13343	20.00	35.76	2066
1979	5	2347	7	1418	11	3765	45.45	62.34	1971
1980	22	10012	52	10747	74	20759	29.73	48.23	2024
1981	18	9363	55	11168	73	20531	24.66	45.60	1954
1982	6	3091	11	2425	17	5516	35.29	56.04	1548
1983	7	3741	16	3478	23	7219	30.43	51.82	1402
1984	7	4256	13	2890	20	7146	35.00	59.56	1012
1985	8	4685	16	3582	25	8267	32.00	56.67	914
1986	7	3417	12	2634	19	6051	36.84	56.47	922
1987[1]	9	4484	15	3244	24	7728	37.50	58.02	916
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	11.30	5700.10	27.80	5878.90	39.00	11579.00	*28.97	*49.23	1578.60
S.D.:	6.93	3242.95	20.36	4179.46	26.88	7306.13	* 1.40	* 1.74	484.47
95% LCL:	6.34	3380.39	13.23	2889.30	19.77	6352.88	*25.65	*45.09	1232.06
95% UCL:	16.26	8019.81	42.37	8868.50	58.23	16805.12	*32.30	*53.36	1925.14
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	7.00	3838.00	13.60	3001.80	20.80	6839.80	*33.65	*56.11	1159.60
S.D.:	0.71	639.69	2.30	510.85	3.19	1078.09	* 1.20	* 1.30	295.03
95% LCL:	6.12	3043.85	10.74	2367.60	16.84	5501.39	*31.31	*53.56	793.33
95% UCL:	7.88	4632.15	16.46	3636.00	24.76	8176.21	*36.00	*58.67	1525.87

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1k. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 8, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 8

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	50	27847	84	18210	134	46057	37.31	60.46	1608
1975	28	14513	83	17669	111	32182	25.23	45.10	1875
1976	17	9128	50	10628	67	19756	25.37	46.20	1823
1977	15	7915	55	11754	70	19669	21.43	40.24	1582
1978	3	1487	28	5901	31	7388	9.68	20.13	1588
1979	5	2719	9	1881	14	4600	35.71	59.11	1617
1980	22	10362	67	13953	89	24315	24.72	42.62	1536
1981	13	6940	38	8644	51	15584	25.49	44.53	1524
1982	9	3457	9	2238	17	5695	52.94	60.70	1395
1983	9	4836	15	3441	24	8277	37.50	58.43	1089
1984	16	8471	16	4063	32	12534	50.00	67.58	774
1985	15	6604	16	4589	31	11193	48.39	59.00	744
1986	16	8029	8	2010	24	10039	66.67	79.98	732
1987[1]	8	4239	12	2627	20	6866	40.00	61.74	704
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	12.30	6082.00	26.10	5847.40	38.30	11929.40	*32.11	*50.98	1258.10
S.D.:	5.76	2849.02	20.80	4248.62	24.35	6304.27	* 3.94	* 3.95	381.99
95% LCL:	8.18	4044.08	11.22	2808.33	20.88	7419.91	*22.76	*41.62	984.86
95% UCL:	16.42	8119.92	40.98	8886.47	55.72	16438.89	*41.47	*60.35	1531.34
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	13.00	6279.40	12.80	3268.20	25.60	9547.60	*50.78	*65.77	946.80
S.D.:	3.67	2122.43	3.96	1123.66	6.11	2661.03	* 4.41	* 4.13	290.79
95% LCL:	8.44	3644.47	7.88	1873.21	18.02	6244.02	*42.15	*57.67	585.80
95% UCL:	17.56	8914.33	17.72	4663.19	33.18	12851.18	*59.42	*73.87	1307.80

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 11. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 9, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 9

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	8	4396	2	420	10	4816	80.00	91.28	407
1975	6	3395	3	628	9	4023	66.67	84.39	432
1976	5	2833	1	310	7	3143	71.43	90.14	347
1977	4	2454	1	266	6	2720	66.67	90.22	292
1978	7	3702	5	1013	11	4715	63.64	78.52	287
1979	21	11445	6	1239	26	12684	80.77	90.23	283
1980	12	6153	3	522	14	6675	85.71	92.18	268
1981	13	7024	4	834	17	7858	76.47	89.39	252
1982	13	6706	2	395	14	7101	92.86	94.44	222
1983	7	3891	2	447	9	4338	77.78	89.70	235
1984	11	5353	2	353	12	5706	91.67	93.81	201
1985	9	4849	2	483	11	5332	81.82	90.94	178
1986	6	3131	2	418	8	3549	75.00	88.22	180
1987[1]	4	2121	1	309	5	2430	80.00	87.28	172
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	10.30	5470.80	2.90	597.00	12.80	6067.80	*80.47	*90.16	239.80
S.D.:	4.88	2596.91	1.60	320.49	5.63	2817.84	* 2.17	* 0.98	43.47
95% LCL:	6.81	3613.21	1.76	367.75	8.77	4052.18	*75.31	*87.84	208.71
95% UCL:	13.79	7328.39	4.04	826.25	16.83	8083.42	*85.63	*92.49	270.89
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	9.20	4786.00	2.00	419.20	10.80	5205.20	*85.19	*91.95	203.20
S.D.:	2.86	1374.04	0.00	49.53	2.39	1356.09	* 3.59	* 1.16	25.21
95% LCL:	5.64	3080.18	2.00	357.71	7.84	3521.66	*78.15	*89.68	171.90
95% UCL:	12.76	6491.82	2.00	480.69	13.76	6888.74	*92.22	*94.21	234.50

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 1m. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 10, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 10

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	62	36686	36	7880	99	44566	62.63	82.32	1031
1975	15	9604	16	3304	31	12908	48.39	74.40	1330
1976	19	11266	20	4269	39	15535	48.72	72.52	1207
1977	19	11366	17	3677	36	15043	52.78	75.56	1063
1978	13	7416	22	4782	35	12198	37.14	60.80	1069
1979	5	3129	14	3106	20	6235	25.00	50.18	1051
1980	35	19347	28	5916	63	25263	55.56	76.58	1003
1981	8	4698	11	2226	19	6924	42.11	67.85	979
1982	30	16820	16	3526	46	20346	65.22	82.67	837
1983	10	5084	12	2767	22	7851	45.45	64.76	934
1984	19	10241	8	1837	28	12078	67.86	84.79	718
1985	40	22460	11	2261	51	24721	78.43	90.85	644
1986	34	15627	15	3471	49	19098	69.39	81.83	656
1987[1]	18	9434	9	1858	27	11292	66.67	83.55	656
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	21.30	11618.80	15.40	3356.90	36.90	14975.70	*57.72	*77.58	895.40
S.D.:	12.58	6688.95	5.89	1243.87	14.98	7108.22	* 3.95	* 2.72	169.28
95% LCL:	12.30	6834.15	11.19	2467.15	26.18	9891.14	*48.36	*71.12	774.32
95% UCL:	30.30	16403.45	19.61	4246.65	47.62	20060.26	*67.09	*84.05	1016.48
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	26.60	14046.40	12.40	2772.40	39.20	16818.80	*67.86	*83.52	757.80
S.D.:	12.03	6629.21	3.21	740.35	13.26	6763.45	* 4.25	* 3.15	124.72
95% LCL:	11.66	5816.47	8.42	1853.28	22.74	8422.21	*59.53	*77.34	602.97
95% UCL:	41.54	22276.33	16.38	3691.52	55.66	25215.39	*76.18	*89.69	912.63

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix In. Summary of commercial Atlantic salmon catch and effort data for Salmon Fishing Area 11, 1974-87. Weight in metric tonnes.

SALMON FISHING AREA 11

YEAR	SMALL WEIGHT	SMALL NUMBER	LARGE WEIGHT	LARGE NUMBER	TOTAL WEIGHT	TOTAL NUMBER	PERCENT SMALL(W)	PERCENT SMALL(N)	POTENTIAL EFFORT
1974	44	26569	117	22993	161	49562	27.33	53.61	1008
1975	49	27829	80	16247	128	44076	38.28	63.14	1504
1976	56	32968	133	29647	190	62615	29.47	52.65	1377
1977	12	7047	39	8747	52	15794	23.08	44.62	1288
1978	10	5507	21	4554	31	10061	32.26	54.74	1298
1979	18	10011	34	7279	51	17290	35.29	57.90	1279
1980	36	17616	31	6398	67	24014	53.73	73.36	1268
1981	15	8184	30	6239	46	14423	32.61	56.74	1254
1982	35	18604	41	9803	76	28407	46.05	65.49	1097
1983	18	9735	25	5859	44	15594	40.91	62.43	1069
1984	17	9187	17	3909	34	13096	50.00	70.15	786
1985	48	25943	54	13229	101	39172	47.52	66.23	722
1986	41	22205	26	5804	67	28009	61.19	79.28	740
1987[1]	25	13218	26	5609	50	18827	50.00	70.21	728
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1977-1986):									
MEAN:	25.00	13403.90	31.80	7182.10	56.90	20586.00	*43.94	*65.11	1080.10
S.D.:	13.59	7088.68	10.82	2762.18	21.22	9049.65	* 3.13	* 2.97	241.90
95% LCL:	15.28	8333.32	24.06	5206.30	41.72	14112.72	*36.51	*58.06	907.07
95% UCL:	34.72	18474.48	39.54	9157.90	72.08	27059.28	*51.36	*72.17	1253.13
MEANS,STANDARD DEVIATIONS AND CONFIDENCE INTERVALS (1982-1986):									
MEAN:	31.80	17134.80	32.60	7720.80	64.40	24855.60	*49.38	*68.94	882.80
S.D.:	13.85	7472.86	14.77	3753.20	26.56	10625.22	* 4.26	* 4.15	184.51
95% LCL:	14.61	7857.51	14.26	3061.33	31.43	11664.76	*41.04	*60.80	653.74
95% UCL:	48.99	26412.09	50.94	12380.27	97.37	38046.44	*57.72	*77.08	1111.86

NOTE: FLAGGED VALUES INDICATE CALCULATIONS OBTAINED USING RATIO ESTIMATORS

[1]Preliminary figures.

Appendix 2a. Summary of recreational Atlantic salmon catch and effort data for Newfoundland Region (total), 1953-87.

NEWFOUNDLAND REGION (TOTAL)

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	27955	7519	707	8226	0.29	.
1954	17074	3421	709	4130	0.24	91
1955	11381	4829	402	5231	0.46	89
1956	33633	7680	609	8289	0.25	89
1957	17856	8949	739	9688	0.54	91
1958	16959	10027	896	10923	0.64	91
1959	18070	8795	750	9545	0.53	93
1960	17929	7290	673	7963	0.44	93
1961	14364	5189	428	5617	0.39	94
1962	22252	9965	769	10734	0.48	87
1963	27518	11494	609	12103	0.44	94
1964	36469	17351	967	18318	0.50	92
1965	35909	13439	784	14223	0.40	96
1966	36353	15339	746	16085	0.44	95
1967	39503	10476	373	10849	0.27	98
1968	41825	18375	681	19056	0.46	94
1969	41966	17793	409	18202	0.43	98
1970	41683	17932	421	18353	0.44	98
1971	41056	15940	457	16397	0.40	98
1972	36295	15180	486	15666	0.43	97
1973	51408	25347	741	26088	0.51	95
1974	70673	17279	683	17962	0.25	97
1975	62220	18962	418	19380	0.31	98
1976	68112	19630	840	20470	0.30	96
1977	72373	24307	1879	26186	0.36	91
1978	67434	21841	1200	23041	0.34	95
1979	53383	21066	869	21935	0.41	96
1980	69097	26235	1272	27507	0.40	94
1981	79729	33921	852	34773	0.44	97
1982	88321	28820	1072	29892	0.34	97
1983	85295	23988	993	24981	0.29	97
1984	82871	26779	372	27151	0.33	98
1985	85485	28536	194	28730	0.34	99
1986	82060	26575	283	26858	0.33	99
1987	51570	16492	418	16910	0.33	98
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	84806.4	26939.6	582.8	27522.4	0.32	98
$\bar{X}\pm$95%cl	±3062.9	±2400.9	±516.8	±2332.2	±0.02	±1.53
N	5	5	5	5	5	5
77-86	76604.8	26206.8	898.6	27105.4	0.35	97
$\bar{X}\pm$95%cl	±7792.9	±2679.2	±368.3	±2590.6	±0.03	±1.55
N	10	10	10	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2b. Summary of recreational Atlantic salmon catch and effort data for Newfoundland Region (Insular), 1953-87.

NEWFOUNDLAND REGION (INSULAR)

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	27955	7519	707	8226	0.29	.
1954	16974	3071	559	3630	0.21	93
1955	11183	4704	394	5098	0.46	89
1956	33532	7660	609	8269	0.25	89
1957	17514	7927	690	8617	0.49	92
1958	16593	9178	876	10054	0.61	90
1959	17570	7972	713	8685	0.49	93
1960	17530	6732	634	7366	0.42	93
1961	13730	4476	302	4778	0.35	96
1962	21641	9201	711	9912	0.46	86
1963	26824	10122	551	10673	0.40	94
1964	34886	15435	846	16281	0.47	92
1965	34083	11895	548	12443	0.37	97
1966	34073	13361	384	13745	0.40	97
1967	38067	9391	178	9569	0.25	99
1968	40004	16244	372	16616	0.42	96
1969	40347	16181	289	16470	0.41	98
1970	38933	15485	180	15665	0.40	99
1971	38417	12933	218	13151	0.34	99
1972	33487	12656	142	12798	0.38	99
1973	46180	19286	164	19450	0.42	99
1974	67894	15518	171	15689	0.23	99
1975	60191	16059	245	16304	0.27	98
1976	64853	16402	320	16722	0.26	98
1977	69057	21375	1186	22561	0.33	93
1978	63599	19723	616	20339	0.32	97
1979	50199	17849	379	18228	0.36	98
1980	66625	23373	720	24093	0.36	96
1981	77884	30428	552	30980	0.40	98
1982	85200	25987	531	26518	0.31	98
1983	82167	21616	695	22311	0.27	97
1984	79740	24831	47	24878	0.31	100
1985	82783	26527	*	26527	0.32	100
1986	79009	24182	*	24182	0.31	100
1987	47809	13013	*	13013	0.27	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	81779.8	24628.6	424.3	24883.2	0.30	99
$\bar{X}\pm$95%cl	±3085.0	±2385.6	±836.9	±2193.4	±0.02	±1.49
N	5	5	3	5	5	5
77-86	73626.3	23589.1	590.8	24061.7	0.33	98
$\bar{X}\pm$95%cl	±7888.8	±2609.8	±269.6	±2544.4	±0.03	±1.28
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2c. Summary of recreational Atlantic salmon catch and effort data for Newfoundland Region (Labrador), 1953-87.

NEWFOUNDLAND REGION (LABRADOR)

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	.	.	.	.	.	.
1954	100	350	150	500	5.00	.
1955	198	125	8	133	0.67	98
1956	101	20	0	20	0.20	100
1957	342	1022	49	1071	3.13	29
1958	366	849	20	869	2.37	98
1959	500	823	37	860	1.72	96
1960	399	558	39	597	1.50	95
1961	634	713	126	839	1.32	82
1962	611	764	58	822	1.35	92
1963	694	1372	58	1430	2.06	93
1964	1583	1916	121	2037	1.29	92
1965	1826	1544	236	1780	0.97	89
1966	2280	1978	362	2340	1.03	81
1967	1436	1085	195	1280	0.89	91
1968	1821	2131	309	2440	1.34	78
1969	1619	1612	120	1732	1.07	95
1970	2750	2447	241	2688	0.98	87
1971	2639	3007	239	3246	1.23	91
1972	2808	2524	344	2868	1.02	90
1973	5228	6061	577	6638	1.27	81
1974	2779	1761	512	2273	0.82	92
1975	2029	2903	173	3076	1.52	91
1976	3259	3228	520	3748	1.15	85
1977	3316	2932	693	3625	1.09	82
1978	3835	2118	584	2702	0.70	83
1979	3184	3217	490	3707	1.16	81
1980	2472	2862	552	3414	1.38	85
1981	1845	3493	300	3793	2.06	91
1982	3121	2833	541	3374	1.08	87
1983	3128	2372	298	2670	0.85	90
1984	3131	1948	325	2273	0.73	88
1985	2702	2009	194	2203	0.82	91
1986	3051	2393	283	2676	0.88	88
1987	3761	3479	418	3897	1.04	85
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	3026.6	2311.0	328.2	2639.2	0.87	89
$\bar{X}\pm$95%cl	±229.0	±441.6	±159.8	±577.9	±0.17	±2.49
N	5	5	5	5	5	5
77-86	2978.5	2617.7	426.0	3043.7	1.02	86
$\bar{X}\pm$95%cl	±382.9	±377.8	±118.3	±431.7	±0.22	±2.43
N	10	10	10	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2d. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 1, 1953-87.

SALMON FISHING AREA :01

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	.	.	.	.	.	.
1954	.	.	.	.	.	.
1955	.	.	.	.	.	.
1956	.	.	.	.	.	.
1957	.	.	.	.	.	.
1958	.	.	.	.	.	.
1959	.	.	.	.	.	.
1960	.	.	.	.	.	.
1961	.	.	.	.	.	.
1962	.	.	.	.	.	.
1963	.	.	.	.	.	.
1964	44	18	3	21	0.48	.
1965	278	57	75	132	0.47	19
1966	397	367	252	619	1.56	18
1967	468	119	106	225	0.48	78
1968	748	192	222	414	0.55	35
1969	.	.	.	.	.	100
1970	420	275	129	404	0.96	.
1971	523	171	82	253	0.48	77
1972	690	450	170	620	0.90	50
1973	700	533	128	661	0.94	78
1974	469	101	268	369	0.79	67
1975	245	379	117	496	2.02	46
1976	928	891	368	1259	1.36	51
1977	809	688	533	1221	1.51	63
1978	694	875	432	1307	1.88	61
1979	1101	595	323	918	0.83	73
1980	711	677	231	908	1.28	72
1981	414	660	195	855	2.07	78
1982	742	784	363	1147	1.55	65
1983	694	468	136	604	0.87	85
1984	832	681	212	893	1.07	69
1985	946	642	135	777	0.82	83
1986	568	369	125	494	0.87	84
1987	955	817	135	952	1.00	73
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	756.4	588.8	194.2	783.0	1.04	76.91
$\bar{X}\pm$95%cl	±177.0	±208.1	±124.9	±316.7	±0.37	±12.89
N	5	5	5	5	5	5
77-86	751.1	643.9	268.5	912.4	1.21	72.16
$\bar{X}\pm$95%cl	±136.1	±103.0	±99.6	±184.4	±0.30	±6.67
N	10	10	10	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2e. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 2, 1953-87.

SALMON FISHING AREA :02

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	.	.	.	.	.	.
1954	100	350	150	500	5.00	.
1955	198	125	8	133	0.67	98
1956	101	20	0	20	0.20	100
1957	342	1022	49	1071	3.13	29
1958	366	849	20	869	2.37	98
1959	500	823	37	860	1.72	96
1960	399	558	39	597	1.50	95
1961	634	713	126	839	1.32	82
1962	611	764	58	822	1.35	92
1963	694	1372	58	1430	2.06	93
1964	1539	1898	118	2016	1.31	92
1965	1548	1487	161	1648	1.06	92
1966	1883	1611	110	1721	0.91	93
1967	968	966	89	1055	1.09	95
1968	1073	1939	87	2026	1.89	92
1969	1619	1612	120	1732	1.07	94
1970	2330	2172	112	2284	0.98	94
1971	2116	2836	157	2993	1.41	93
1972	2118	2074	174	2248	1.06	94
1973	4528	5528	449	5977	1.32	82
1974	2310	1660	244	1904	0.82	96
1975	1784	2524	56	2580	1.45	97
1976	2331	2337	152	2489	1.07	94
1977	2507	2244	160	2404	0.96	94
1978	3141	1243	152	1395	0.44	94
1979	2083	2622	167	2789	1.34	88
1980	1761	2185	321	2506	1.42	89
1981	1431	2833	105	2938	2.05	95
1982	2379	2049	178	2227	0.94	94
1983	2434	1904	162	2066	0.85	93
1984	2299	1267	113	1380	0.60	94
1985	1756	1367	59	1426	0.81	96
1986	2483	2024	158	2182	0.88	90
1987	2806	2662	283	2945	1.05	88
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	2270.2	1722.2	134.0	1856.2	0.82	93.36
$\bar{X}$±95%cl	±366.9	±466.4	±60.1	±519.2	±0.16	±2.22
N	5	5	5	5	5	5
77-86	2227.4	1973.8	157.5	2131.3	0.96	92.72
$\bar{X}$±95%cl	±349.1	±391.2	±48.7	±407.3	±0.29	±1.80
N	10	10	10	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2f. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 3, 1953-87.

SALMON FISHING AREA :03

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	77	58	8	66	0.86	.
1954	134	33	0	33	0.25	100
1955	36	11	0	11	0.31	100
1956	164	70	0	70	0.43	100
1957	68	47	0	47	0.69	100
1958	49	23	0	23	0.47	100
1959	82	14	0	14	0.17	100
1960	45	23	0	23	0.51	100
1961	160	58	1	59	0.37	96
1962	186	92	0	92	0.49	100
1963	353	190	0	190	0.54	100
1964	653	368	0	368	0.56	100
1965	889	677	4	681	0.77	99
1966	2298	1190	21	1211	0.53	97
1967	1725	459	2	461	0.27	100
1968	1801	1243	27	1270	0.71	94
1969	2118	945	45	990	0.47	97
1970	1207	784	1	785	0.65	100
1971	1175	742	11	753	0.64	99
1972	1195	498	0	498	0.42	100
1973	1667	1188	2	1190	0.71	100
1974	1890	839	4	843	0.45	100
1975	1948	1107	0	1107	0.57	100
1976	2284	947	1	948	0.42	100
1977	2249	1530	4	1534	0.68	100
1978	2030	758	1	759	0.37	100
1979	2514	2040	0	2040	0.81	100
1980	2585	1743	37	1780	0.69	98
1981	3113	2358	3	2361	0.76	100
1982	3907	2634	88	2722	0.70	96
1983	4075	1617	2	1619	0.40	100
1984	2248	1001	0	1001	0.45	100
1985	2355	1310	*	1310	0.56	100
1986	1430	772	*	772	0.54	100
1987	1121	563	*	563	0.50	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	2803.0	1466.8	30.0	1484.8	0.53	99.00
$\bar{X}$±95%cl	±1419.9	±901.6	±124.8	±945.9	±0.19	±2.48
N	5	5	3	5	5	5
77-86	2650.6	1576.3	16.9	1589.8	0.60	99.16
$\bar{X}$±95%cl	±590.4	±458.3	±26.2	±471.1	±0.12	±1.15
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2g. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 4, 1953-87.

SALMON FISHING AREA :04

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	8630	2984	501	3485	0.40	.
1954	7344	1172	428	1600	0.22	87
1955	5125	2367	249	2616	0.51	82
1956	10672	3892	458	4350	0.41	84
1957	8789	4423	527	4950	0.56	88
1958	5888	4364	637	5001	0.85	87
1959	6321	3700	520	4220	0.67	89
1960	7051	3441	509	3950	0.56	88
1961	5277	2118	162	2280	0.43	96
1962	8842	4397	482	4879	0.55	81
1963	10910	3710	332	4042	0.37	93
1964	15608	7237	680	7917	0.51	85
1965	13749	4233	318	4551	0.33	96
1966	15249	6433	194	6627	0.43	96
1967	13915	4163	63	4226	0.30	99
1968	15318	5938	201	6139	0.40	95
1969	13807	4024	114	4138	0.30	98
1970	15759	4849	47	4896	0.31	99
1971	11379	3783	58	3841	0.34	99
1972	10778	3444	24	3468	0.32	99
1973	14544	6710	49	6759	0.46	99
1974	22038	5373	82	5455	0.25	99
1975	22384	5943	166	6109	0.27	97
1976	24787	6683	188	6871	0.28	97
1977	28117	8396	1086	9482	0.34	86
1978	24131	8774	502	9276	0.38	94
1979	21496	8026	327	8353	0.39	96
1980	25172	9414	507	9921	0.39	94
1981	32282	13536	361	13897	0.43	96
1982	32929	9973	258	10231	0.31	98
1983	26649	8954	297	9251	0.35	97
1984	29633	9900	15	9915	0.33	100
1985	34329	12190	*	12190	0.36	100
1986	31650	9293	*	9293	0.29	100
1987	18564	5453	*	5453	0.29	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	31038.0	10062.0	190.0	10176.0	0.33	98.97
$\bar{X}\pm$95%cl	±3725.9	±1568.3	±379.6	±1490.3	±0.03	±1.61
N	5	5	3	5	5	5
77-86	28638.8	9845.6	419.1	10180.9	0.36	96.62
$\bar{X}\pm$95%cl	±3032.2	±1238.6	±259.7	±1175.2	±0.03	±2.61
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2h. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 5, 1953-87.

SALMON FISHING AREA :05

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	6209	1099	37	1136	0.18	.
1954	3302	499	29	528	0.16	97
1955	1764	815	35	850	0.48	93
1956	12072	1077	62	1139	0.09	93
1957	2326	822	44	866	0.37	96
1958	2719	1384	40	1424	0.52	95
1959	3063	1125	43	1168	0.38	97
1960	2580	767	14	781	0.30	99
1961	2185	409	36	445	0.20	96
1962	2639	973	62	1035	0.39	87
1963	4519	1546	61	1607	0.36	94
1964	4877	2376	63	2439	0.50	96
1965	5231	1803	33	1836	0.35	99
1966	4281	1431	35	1466	0.34	98
1967	3754	1569	25	1594	0.42	98
1968	3732	2226	44	2270	0.61	97
1969	5769	2605	27	2632	0.46	.99
1970	3189	2226	35	2261	0.71	99
1971	5963	1680	38	1718	0.29	98
1972	2015	1895	20	1915	0.95	99
1973	3894	2112	12	2124	0.55	99
1974	9335	1637	21	1658	0.18	99
1975	7527	1988	23	2011	0.27	99
1976	6975	1898	65	1963	0.28	97
1977	10572	4616	44	4660	0.44	98
1978	9108	2858	28	2886	0.32	99
1979	3926	1331	20	1351	0.34	99
1980	8155	2702	29	2731	0.33	98
1981	8863	3488	35	3523	0.40	99
1982	9935	2433	53	2486	0.25	99
1983	10195	2357	170	2527	0.25	93
1984	12403	2703	1	2704	0.22	100
1985	11613	3484	*	3484	0.30	100
1986	11510	4053	*	4053	0.35	100
1987	5267	1664	*	1664	0.32	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	11131.2	3006.0	74.7	3050.8	0.27	98.48
$\bar{X}\pm$95%cl	±1287.5	±913.7	±215.0	±857.0	±0.07	±3.19
N	5	5	3	5	5	5
77-86	9628.0	3002.5	47.5	3040.5	0.32	98.65
$\bar{X}\pm$95%cl	±1720.0	±670.7	±43.4	±663.2	±0.05	±1.33
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 21. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 6, 1953-87.

SALMON FISHING AREA :06

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	6513	118	0	118	0.02	0
1954	2515	44	0	44	0.02	100
1955	628	92	0	92	0.15	100
1956	4402	92	2	94	0.02	98
1957	805	87	0	87	0.11	100
1958	592	115	0	115	0.19	100
1959	535	55	0	55	0.10	100
1960	547	54	0	54	0.10	100
1961	512	19	0	19	0.04	100
1962	575	53	0	53	0.09	100
1963	837	93	1	94	0.11	98
1964	978	92	0	92	0.09	100
1965	871	85	3	88	0.10	97
1966	935	90	0	90	0.10	100
1967	1480	89	0	89	0.06	100
1968	1126	120	0	120	0.11	100
1969	917	106	0	106	0.12	100
1970	650	84	3	87	0.13	97
1971	710	55	1	56	0.08	99
1972	1345	119	0	119	0.09	100
1973	1683	250	0	250	0.15	100
1974	2685	303	1	304	0.11	100
1975	1851	94	1	95	0.05	100
1976	2864	247	2	249	0.09	98
1977	1869	401	19	420	0.22	93
1978	2237	296	7	303	0.14	98
1979	1766	244	2	246	0.14	99
1980	2807	320	14	334	0.12	95
1981	3406	605	29	634	0.19	92
1982	3031	288	17	305	0.10	97
1983	3684	296	10	306	0.08	97
1984	3218	312	5	317	0.10	98
1985	2256	429	*	429	0.19	100
1986	2596	445	*	445	0.17	100
1987	1306	137	*	137	0.10	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	2957.0	354.0	10.7	360.4	0.12	98.37
$\bar{X}\pm$95%cl	±686.8	±94.9	±15.0	±87.3	±0.06	±1.93
N	5	5	3	5	5	5
77-86	2687.0	363.6	12.9	373.9	0.14	97.09
$\bar{X}\pm$95%cl	±467.2	±77.0	±7.3	±80.3	±0.03	±1.96
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2j. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 7, 1953-87.

SALMON FISHING AREA :07

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	244	43	0	43	0.18	0
1954	41	5	0	5	0.12	100
1955	7	0	0	0	0.00	100
1956	307	27	1	28	0.09	0
1957	59	24	1	25	0.42	96
1958	72	19	0	19	0.26	100
1959	134	13	0	13	0.10	100
1960	128	25	1	26	0.20	93
1961	54	7	2	9	0.17	93
1962	.	.	.	.	.	100
1963	275	36	0	36	0.13	0
1964	660	59	0	59	0.09	100
1965	762	165	1	166	0.22	98
1966	647	97	0	97	0.15	100
1967	997	78	0	78	0.08	100
1968	829	31	1	32	0.04	99
1969	1216	33	0	33	0.03	100
1970	1103	20	1	21	0.02	97
1971	1295	40	0	40	0.03	100
1972	875	61	0	61	0.07	100
1973	1167	131	0	131	0.11	100
1974	2019	133	2	135	0.07	98
1975	1436	40	0	40	0.03	100
1976	1128	30	0	30	0.03	100
1977	1775	78	1	79	0.04	97
1978	1786	99	1	100	0.06	99
1979	1332	125	0	125	0.09	100
1980	1546	102	1	103	0.07	99
1981	1348	123	2	125	0.09	98
1982	1621	155	10	165	0.10	92
1983	1804	139	34	173	0.10	82
1984	1381	96	4	100	0.07	97
1985	1635	112	*	112	0.07	100
1986	700	102	*	102	0.15	100
1987	632	28	*	28	0.04	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	1428.2	120.8	16.0	130.4	0.09	92.87
$\bar{X}\pm$95%cl	±539.0	±31.3	±39.4	±44.3	±0.03	±11.02
N	5	5	3	5	5	5
77-86	1492.8	113.1	6.6	118.4	0.08	95.23
$\bar{X}\pm$95%cl	±237.2	±16.2	±9.6	±21.3	±0.02	±5.91
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2k. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 8, 1953-87.

SALMON FISHING AREA :08

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	50	6	0	6	0.12	0
1954	.	.	.	.	.	100
1955	.	.	.	.	.	.
1956	.	.	.	.	.	.
1957	.	.	.	.	.	.
1958	.	.	.	.	.	.
1959	.	.	.	.	.	.
1960	.	.	.	.	.	.
1961	.	.	.	.	.	.
1962	.	.	.	.	.	.
1963	.	.	.	.	.	.
1964	.	.	.	.	.	.
1965	17	44	6	50	2.94	.
1966	100	32	2	34	0.34	96
1967	.	.	.	.	.	100
1968	166	22	0	22	0.13	0
1969	16	12	0	12	0.75	100
1970	.	.	.	.	.	100
1971	290	25	9	34	0.12	.
1972	270	28	0	28	0.10	100
1973	410	94	4	98	0.24	88
1974	659	51	0	51	0.08	100
1975	527	87	0	87	0.17	100
1976	514	80	0	80	0.16	100
1977	530	81	0	81	0.15	100
1978	269	44	0	44	0.16	100
1979	331	100	0	100	0.30	100
1980	316	120	0	120	0.38	100
1981	384	77	0	77	0.20	100
1982	538	85	9	94	0.17	90
1983	414	41	5	46	0.11	94
1984	357	79	0	79	0.22	100
1985	611	103	*	103	0.17	100
1986	696	138	*	138	0.20	100
1987	268	43	*	43	0.16	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
$\bar{X}$ 82-86	523.2	89.2	4.7	92.0	0.18	96.49
$\bar{X}\pm$95%cl	±172.6	±44.0	±11.2	±41.8	±0.04	±6.13
N	5	5	3	5	5	5
$\bar{X}$ 77-86	444.6	86.8	1.8	88.2	0.20	98.30
$\bar{X}\pm$95%cl	±101.0	±21.7	±2.9	±21.2	±0.04	±2.68
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 21. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 9, 1953-87.

SALMON FISHING AREA :09

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	3012	1954	44	1998	0.66	.
1954	1712	617	32	649	0.38	98
1955	1701	673	36	709	0.42	94
1956	2411	1319	22	1341	0.56	97
1957	2602	1355	48	1403	0.54	96
1958	3094	1350	51	1401	0.45	96
1959	3557	1447	52	1499	0.42	96
1960	4223	937	46	983	0.23	97
1961	2681	705	17	722	0.27	98
1962	3685	1002	38	1040	0.28	95
1963	4311	1620	48	1668	0.39	95
1964	6044	1295	23	1318	0.22	99
1965	5214	1852	76	1928	0.37	94
1966	3416	822	13	835	0.24	99
1967	7421	900	17	917	0.12	98
1968	5264	1105	1	1106	0.21	100
1969	6976	1422	9	1431	0.21	-99
1970	7701	1893	12	1905	0.25	99
1971	6704	1620	19	1639	0.24	99
1972	5633	1139	8	1147	0.20	100
1973	7660	2160	20	2180	0.28	98
1974	9162	1494	9	1503	0.16	100
1975	10046	1872	6	1878	0.19	100
1976	8809	1623	12	1635	0.19	99
1977	8766	1080	9	1089	0.12	99
1978	7224	1303	17	1320	0.18	98
1979	5859	1704	15	1719	0.29	99
1980	6446	2379	61	2440	0.38	97
1981	6343	1862	52	1914	0.30	98
1982	8574	1825	33	1858	0.22	98
1983	10754	2303	71	2374	0.22	96
1984	8754	2264	5	2269	0.26	100
1985	9385	1750	*	1750	0.19	100
1986	8807	2298	*	2298	0.26	100
1987	5994	867	*	867	0.14	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	9254.8	2088.0	36.3	2109.8	0.23	98.92
$\bar{X}\pm$95%cl	±1107.0	±342.7	±82.3	±353.1	±0.04	±1.96
N	5	5	3	5	5	5
77-86	8091.2	1876.8	32.9	1903.1	0.24	98.57
$\bar{X}\pm$95%cl	±1116.0	±317.6	±21.3	±325.4	±0.05	±1.02
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2m. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 10, 1953-87.

SALMON FISHING AREA :10

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	2216	712	44	756	0.34	.
1954	1486	356	37	393	0.26	95
1955	1584	306	29	335	0.21	92
1956	2814	425	14	439	0.16	96
1957	2064	484	30	514	0.25	93
1958	3046	1043	65	1108	0.36	88
1959	2525	657	33	690	0.27	97
1960	2197	511	23	534	0.24	97
1961	1507	236	2	238	0.16	100
1962	3658	679	68	747	0.20	78
1963	3785	1058	38	1096	0.29	95
1964	3507	1408	18	1426	0.41	98
1965	4591	875	43	918	0.20	97
1966	4334	820	22	842	0.19	98
1967	4942	333	4	337	0.07	100
1968	6641	1387	6	1393	0.21	98
1969	3800	979	29	1008	0.27	98
1970	3899	601	7	608	0.16	99
1971	4796	928	17	945	0.20	97
1972	5841	567	4	571	0.10	100
1973	8714	1785	42	1827	0.21	93
1974	10987	1212	14	1226	0.11	99
1975	5999	427	9	436	0.07	99
1976	8811	730	10	740	0.08	98
1977	7213	1097	5	1102	0.15	99
1978	8764	1595	42	1637	0.19	96
1979	6405	849	8	857	0.13	100
1980	9588	1524	27	1551	0.16	97
1981	9309	1317	29	1346	0.14	98
1982	9331	1256	10	1266	0.14	99
1983	9173	1140	79	1219	0.13	94
1984	6361	1457	2	1459	0.23	100
1985	6887	1326	*	1326	0.19	100
1986	6387	1535	*	1535	0.24	100
1987	3348	429	*	429	0.13	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	7627.8	1342.8	30.3	1361.0	0.18	98.62
$\bar{X}$±95%cl	±1860.6	±195.3	±105.2	±164.6	±0.06	±3.22
N	5	5	3	5	5	5
77-86	7941.8	1309.6	25.3	1329.8	0.17	98.38
$\bar{X}$±95%cl	±1001.0	±166.8	±21.6	±167.6	±0.03	±1.46
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 2n. Summary of recreational Atlantic salmon catch and effort data for Salmon Fishing Area 11, 1953-87.

SALMON FISHING AREA :11

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	1004	545	73	618	0.62	.
1954	440	345	33	378	0.86	94
1955	338	440	45	485	1.43	88
1956	690	758	50	808	1.17	90
1957	801	685	40	725	0.91	95
1958	1133	880	83	963	0.85	89
1959	1353	961	65	1026	0.76	93
1960	759	974	41	1015	1.34	96
1961	1354	924	82	1006	0.74	92
1962	2056	2005	61	2066	1.00	94
1963	1834	1869	71	1940	1.06	97
1964	2559	2600	62	2662	1.04	97
1965	2759	2161	64	2225	0.81	98
1966	2813	2446	97	2543	0.90	96
1967	3833	1800	67	1867	0.49	97
1968	5127	4172	92	4264	0.83	95
1969	5728	6055	65	6120	1.07	98
1970	5425	5028	74	5102	0.94	99
1971	6105	4060	65	4125	0.68	99
1972	5535	4905	86	4991	0.90	98
1973	6441	4856	35	4891	0.76	99
1974	9119	4476	38	4514	0.50	99
1975	8473	4501	40	4541	0.54	99
1976	8681	4164	42	4206	0.48	99
1977	7966	4096	18	4114	0.52	100
1978	8050	3996	18	4014	0.50	100
1979	6570	3430	7	3437	0.52	100
1980	10010	5069	44	5113	0.51	99
1981	12836	7062	41	7103	0.55	99
1982	15334	7338	53	7391	0.48	99
1983	15419	4769	27	4796	0.31	100
1984	15385	7019	15	7034	0.46	100
1985	13712	5823	*	5823	0.42	100
1986	15233	5546	*	5546	0.36	100
1987	11309	3829	*	3829	0.34	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	15016.6	6099.0	31.7	6118.0	0.41	99.70
$\bar{X}\pm$95%cl	±909.7	±1321.7	±48.3	±1334.6	±0.09	±0.41
N	5	5	3	5	5	5
77-86	12051.5	5414.8	27.9	5437.1	0.45	99.58
$\bar{X}\pm$95%cl	±2541.9	±994.6	±13.6	±1000.3	±0.06	±0.26
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 3. Summary of recreational Atlantic salmon catch and effort data for Bay du Nord River, 1953-87.

RIVER: BAY DU NORD RIVER CODE: 34107900

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	100	17	6	23	0.23	.
1954	11	3	0	3	0.27	100
1955	29	9	3	12	0.41	50
1956	46	7	7	14	0.30	56
1957	67	18	3	21	0.31	70
1958	73	30	6	36	0.49	75
1959	166	43	20	63	0.38	60
1960	145	22	9	31	0.21	83
1961	133	20	7	27	0.20	76
1962	149	35	7	42	0.28	74
1963	158	59	16	75	0.47	69
1964	171	37	2	39	0.23	97
1965	48	20	2	22	0.46	95
1966	128	11	4	15	0.12	83
1967	32	23	4	27	0.84	73
1968	35	38	12	50	1.43	66
1969	26	44	1	45	1.73	97
1970	41	51	0	51	1.24	100
1971	32	46	6	52	1.63	89
1972	28	46	9	55	1.96	84
1973	45	97	16	113	2.51	74
1974	323	58	4	62	0.19	96
1975	277	52	4	56	0.20	94
1976	265	40	1	41	0.15	98
1977	154	45	0	45	0.29	100
1978	293	69	2	71	0.24	96
1979	191	34	2	36	0.19	97
1980	357	119	15	134	0.38	69
1981	567	186	5	191	0.34	96
1982	765	105	19	124	0.16	91
1983	683	80	2	82	0.12	98
1984	528	114	4	118	0.22	95
1985	425	50	*	50	0.12	100
1986	497	43	*	43	0.09	100
1987	392	50	*	50	0.13	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	579.6	78.4	8.3	83.4	0.14	96
$\bar{X}$±95%CL	±173.9	±39.4	±23.1	±46.4	±0.06	±6.46
N	5	5	3	5	5	5
77-86	446.0	84.5	6.1	89.4	0.20	95
$\bar{X}$±95%CL	±143.9	±33.8	±5.8	±36.4	±0.07	±4.52
N	10	10	8	10	10	10

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 4. Summary of recreational Atlantic salmon catch and effort data for Southeast Brook, 1953-87.

RIVER: SOUTHEAST BROOK CODE: 36134100

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	.	.	.	.	.	.
1954	.	.	.	.	.	.
1955	.	.	.	.	.	.
1956	.	.	.	.	.	.
1957	.	.	.	.	.	.
1958	.	.	.	.	.	.
1959	.	.	.	.	.	.
1960	.	.	.	.	.	.
1961	.	.	.	.	.	.
1962	.	.	.	.	.	.
1963	.	.	.	.	.	.
1964	.	.	.	.	.	.
1965	.	.	.	.	.	.
1966	.	.	.	.	.	.
1967	.	.	.	.	.	.
1968	.	.	.	.	.	.
1969	.	.	.	.	.	.
1970	.	.	.	.	.	.
1971	31	38	0	38	1.23	.
1972	.	.	.	.	.	100
1973	78	74	0	74	0.95	.
1974	483	86	0	86	0.18	100
1975	437	144	1	145	0.33	99
1976	392	68	0	68	0.17	100
1977	454	110	0	110	0.24	100
1978	403	107	0	107	0.27	100
1979	.	.	.	.	.	100
1980	694	149	0	149	0.21	.
1981	.	.	.	.	.	100
1982	606	153	0	153	0.25	.
1983	.	.	.	.	.	100
1984	.	.	.	.	.	.
1985	.	.	*	.	.	.
1986	261	94	*	94	0.36	.
1987	238	100	*	100	0.42	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	433.5	123.5	0.0	123.5	0.28	100
$\bar{X}\pm$95%CL	±2191.8	±374.8	.	±374.8	±0.58	.
N	2	2	1	2	2	1
77-86	483.6	122.6	0.0	122.6	0.25	100
$\bar{X}\pm$95%CL	±211.6	±33.1	±0.0	±33.1	±0.05	±0.00
N	5	5	4	5	5	5

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.

Appendix 5. Summary of recreational Atlantic salmon catch and effort data for Dolland Brook, 1953-87.

RIVER: DOLLAND BROOK CODE: 36152700

YEAR	EFFORT ROD DAYS	GRILSE <63 CM	SALMON ≥63 CM	TOTAL CATCH	CPUE	PERCENT GRILSE
1953	.	.	.	.	.	.
1954	14	9	0	9	0.64	.
1955	8	7	0	7	0.88	100
1956	50	56	0	56	1.12	100
1957	21	8	1	9	0.43	98
1958	18	7	0	7	0.39	100
1959	28	19	0	19	0.68	100
1960	14	9	1	10	0.71	95
1961	.	.	.	.	.	100
1962	46	33	0	33	0.72	.
1963	14	27	1	28	2.00	97
1964	31	54	2	56	1.81	93
1965	41	47	5	52	1.27	92
1966	116	109	15	124	1.07	76
1967	97	30	22	52	0.54	83
1968	56	75	7	82	1.46	81
1969	.	.	.	.	.	100
1970	.	.	.	.	.	.
1971	4	10	0	10	2.50	.
1972	.	.	.	.	.	100
1973	33	30	1	31	0.94	.
1974	12	1	0	1	0.08	100
1975	4	0	0	0	0.00	100
1976	.	.	.	.	.	0
1977	.	.	.	.	.	.
1978	23	14	0	14	0.61	.
1979	16	9	0	9	0.56	100
1980	81	39	1	40	0.49	90
1981	34	29	0	29	0.85	100
1982	96	70	0	70	0.73	100
1983	132	47	0	47	0.36	100
1984	191	104	0	104	0.54	100
1985	220	95	*	95	0.43	100
1986	231	95	*	95	0.41	100
1987	196	78	*	78	0.40	100
MEANS, 95% CONFIDENCE LIMITS, N'S:						
82-86	174.0	82.2	0.0	82.2	0.47	100
$\bar{X}\pm$95%CL	±72.1	±29.1	±0.0	±29.1	±0.13	±0.00
N	5	5	3	5	5	5
77-86	113.8	55.8	0.1	55.9	0.49	100
$\bar{X}\pm$95%CL	±64.8	±28.0	±0.3	±28.0	±0.10	±0.66
N	9	9	7	9	9	8

PERCENT GRILSE IS CALCULATED BY SMOLT CLASS;
IN THE ABOVE TABLE A PERIOD INDICATES NO DATA FOR THAT YEAR;
* NOT ALLOWED TO RETAIN LARGE SALMON IN INSULAR NEWFOUNDLAND.